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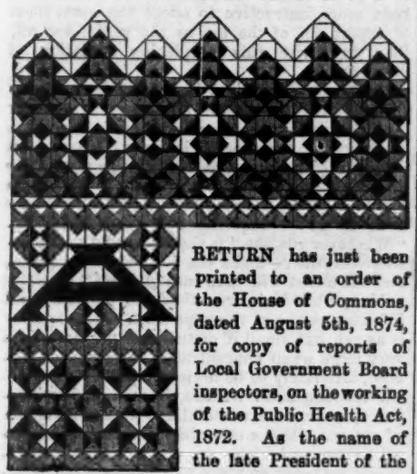
What the Local Government Board Inspectors Say as to the Working of the Public Health Act of 1872.



A RETURN has just been printed to an order of the House of Commons, dated August 5th, 1874, for copy of reports of Local Government Board inspectors, on the working of the Public Health Act, 1872. As the name of the late President of the Local Government Board is on the back of the return, we are justified in considering it to have been moved for as the best method of defending, before the House and the country, both the policy which directed the framing of the Bill, and the administrative vigour and capacity with which the machinery, so created, was guided, and set in motion. The order for the return was dated, as we have seen, in the month of August last. The ten reports printed date from April 27th, 1874, for the earliest, to June 23rd, 1874, for the latest. The order of the House for printing them dates on the 7th of April, 1875. The circular letter of Mr. Fleming, the secretary to the Local Government Board, calling on the inspectors for reports, is referred to as written on April 22nd, 1874.

As regards the outcome of the reports in question there is one point, and one alone, on which the reporters are unanimous. Differing in tone, from an optimist admiration of the wisdom of the measure, to blunt indication of its utter inefficiency, these documents agree in exhibiting the most complete want of system, purpose, or organisation that it is possible to conceive. After the passing of the Public Health Bill of 1872 certain "conferences" took place between the Board and their inspectors, in which the latter "were especially warned against hasty action. They were to consider the circumstances of each district and locality, and advise the authorities in making the appointments required by the Act to secure the services of efficient officers, from whatever source they could be obtained, but they received no instructions authorising them in any way to force the hand of the local authorities, or to control or fetter them in the exercise of the discretionary powers conferred by the Act." "These verbal instructions were followed by the circular letter of the 17th August, 1872, addressed to the inspectors, and conceived in the same spirit. No other specific instructions with regard to the carrying out of the Act have been issued to the inspectors by the Board."

The subject is too serious for a joke. But the above simple statement, in the language of an inspector who speaks of the "credit" of different courses of action under the Act prevailing in different districts, or at different times in the same district, as due to the policy embodied by the legislation in the Act itself, can only be compared to the celebrated advice to persons about to marry, — "Don't." To encourage "the experimental policy," "a policy of local self-government," is considered by the inspector in question to be the gist of the Act. To wait, to do nothing but advise people to procure efficient officers "from whatever source they could be obtained," and carefully to avoid any useful interference with local inaction, is the duty which, on the face of this return, the Local Government Board prescribed to officers from whom the country fondly expected something in the way of sanitary reform. Having been officially ordered, on the 17th of August, 1872, not to be in a hurry, and having then been left without "other specific instructions," and undisturbed by a single question as to the result of their "consideration of the circumstances of each district," so long as the administration which called them into being as sanitary authorities continued in existence, it certainly seems to be much to the credit of the inspectors that they took any trouble whatever in the matter. Certainly nothing that has appeared in our own pages, from the first welcome which we gave to the proposed measure of 1872, down to the present time, has equalled the scathing satire of the present reports.

The return now before us follows the prescriptive usage of the Local Government Board in giving to the public no information that it is possible to withhold. Thus the "Contents" simply begin "No. 2 District. Report of J. J. Henley, esq.," and so on to No. 12 district; Nos. 1 and 5 being omitted. There is no hint as to how many districts exist, or as to the duties or position of the inspectors; none as to the limits of the districts. Nor is the letter calling on the inspectors for the reports published. One inspector, Mr. A. Doyle, has transmitted a report from "Mr. Dyke, the very able officer of health of Merthyr Tydfil, accompanied by a good sketch map, showing the area of a proposed divisional district," which serves more distinctly than any words we can frame, to make conspicuous the absence of any such practical and necessary information in ninety-nine other cases out of the hundred. But in order that the sole bit of professional light shed on the waste of rural and urban district-making should not be too highly valued, it is prefaced by the remark that 'to those who attach importance to the physical, peculiarities of a district . . . . the proposed combination would appear to be recommended by unusual advantages." Men who have given years of anxious thought to the subject of sanitary reform may well be pardoned expressions of annoyance, irritation, and dismay at expressions such as these. The idea that, at the present time of day, a Government inspector should write to his chief about "attaching importance to the physical peculiarities of a district," as if it was a trifling matter of taste; a mere shade of opinion, which one man might, very plausibly, entertain; and another, no less plausibly, disapprove! Is not this enough to dishearten the most courageous? We call especial attention to the fact that Mr. Dyke's able report, which is a practical exemplar of that method of approaching the subject which has all along been advocated in our columns, was sent to the Local Government Board Inspector on the 22nd of October, 1872. We only wonder that the inspector who had the courage to forward, even under the deprecating preface that we have quoted, any document bearing the stamp of professional knowledge of the subject, was not summarily rebuked or dismissed. At all events, a suggestion that might have been of valuable service to the whole country has been shelved for a couple of years.

Passing to the results reported from the various districts, we are unable to present them with the brevity that might be desired, from the fact that each of the ten inspectors has been left to take his own course as to the information he thought fit to supply. The limits of No. 2 district, the first from which a report is published, are nowhere stated in the Blue-book before us. "Four Union counties," it is casually mentioned, are wholly comprised within it. In three of these, viz., Warwickshire, Oxfordshire, and Berkshire (to which must be added a large part of Surrey), Mr. Henley reports that, with the exception of a few isolated spots, they are under the supervision of well-qualified medical officers: the number of these, for the entire area, being six. Forty-five of the authorities appointed under the Act of 1872 (twenty-seven rural, and eighteen urban), appear to contribute to the support of these six medical officers. The latter can hardly complain of too restricted a field of operations. A total number of 114 authorities, fifty-six being rural, and fifty-eight urban, in this No. 2 district, have been thus tabulated in the report:—Forty-eight have entered into combinations for the appointment of a specially qualified medical officer, who shall devote his whole time to sanitary work, and shall not practise privately. Seven have joined with one other authority; forty-three have appointed a single officer independently for the respective districts; seven have appointed the district medical officers, each in his own district; nine have made no appointments. The seven districts last cited have made thirty distinct individual appointments under the Act. Had all the unions in the district acted on the same principle, the number of individuals appointed would have been about 260.

The number of Inspectors of Nuisances through No. 2 district, prior to the passing of the Act of 1872, was 117, of whom 81 were relieving officers. Under that Act the Rural Sanitary Authorities have appointed two inspectors jointly with the adjacent Urban Authorities, at salaries of 100*l.* and 120*l.* per annum. Thirty-

six unions have each appointed one inspector, at an average salary of nearly 100*l.* per annum; and twelve unions have made appointments in aid of which no contribution is sought from the Local Government Board.

Mr. Henley remarks, "It is abundantly clear that the bulk of the sanitary work needed in the country is a question for builders and scavengers." Thus the function of the sanitary engineer is entirely ignored so far as No. 2 district is concerned.

The report of the inspector of No. 3 district is disposed of in a page and a quarter. Fifty-six rural sanitary authorities in this district have appointed inspectors of nuisances, and all, with the exception of St. Alban's and Oakham, officers of health. Out of fifty-five urban authorities, fifty have appointed medical officers and inspectors of nuisances. "There are also three port sanitary authorities," as to whom nothing further is said. Mr. Peel echoes the language of the Local Government Board with much fidelity. He finds that "districts vary so much in population, area, and local circumstances," that "no uniform scheme could have been successfully acted upon." Thus it is intelligible that he should add,—"It seems to me premature to express any opinion on the working of the Act." No hint that any engineering advice might be of use is given in this report.

Mr. Farnall's report, for No. 4 district, is systematic and business-like. He confines himself to the statement of facts, and adopts a definite form, which might be advantageously followed by his brother inspectors. We are thus able to give the results of the Act, in this district, in few words. In the counties of Kent, Norfolk, Suffolk, Cambridge, and Essex, 126 sanitary authorities, with only seven exceptions, have appointed medical officers of health and inspectors of nuisances. The thorough character of Mr. Farnall's inspection is vouched by his calling attention to the appointment, in two districts, of relieving officers as inspectors of nuisances. 18,859 nuisances have been reported to the several sanitary authorities, of which 17,188 have been removed by those authorities, leaving only 8·8 per cent. pending at the date of the report.

Mr. Wodehouse's report, for No. 6 district, enters with considerable detail into his correspondence with the sanitary authorities. The results of his two years' experience are less easy to take in at a glance than is the case under the methodical report of Mr. Farnall. Thirteen Cornish unions have appointed medical officers, but have generally resisted the introduction of inspectors of nuisances. Five Dorsetshire unions, out of six, have appointed medical officers for one year, and also inspectors of nuisances, while in the sixth the relieving officers are said to act in the latter capacity. Nineteen out of twenty Devonshire unions have medical officers, five of whom are debarred from private practice. In only one of these unions is there no inspector of nuisances. Fourteen unions in Somersetshire have made medical appointments varying from one year to five years in duration,—and the inspection of nuisances is also provided for. In the Bristol and Clifton unions, in Gloucestershire, a medical officer has been appointed for a year, and inspectors of nuisances are also provided.

Mr. Wodehouse considers that the appointment of separate and distinct officers as inspectors of nuisances is a great step in advance, as bringing to the notice of the guardians matters of which they had no previous suspicion. He admits that he has had very small success in inducing the authorities to follow the advice which he gave with respect to the medical appointments. He gives no account of nuisances abated; nor does he seem to have any more lofty idea of sanitary reform than that expressed in the other reports, to the effect that it is a mere matter of building and scavenging.

Mr. Corbett's report, for No. 7 district, may be described as going a step further into detail than that of Mr. Farnall. It is a valuable official document; less apt for the immediate use of the analyst than the former, but fuller in its details of information. Copies of correspondence and reports of meetings are appended to the report, and even the names of the medical officers and inspectors of nuisances are given. If compared to engineering reports, that of Mr. Corbett is a good model for that of a resident engineer, that of Mr. Farnall for that of an engineer-in-chief. Thus as regards the ultimate presentation of results to the public, while it is possible, by the collation of some six paragraphs, and the performance of a few slight operations in addition, to arrive at such an abstract as we have already laid before our readers in the former instance, it would consume two or three hours, at least, to extract the same kind of summary from the twenty-five pages supplied by Mr. Corbett. Nor, after all, is the result worth the labour. It may be simply indicated in the words of the reporter. "It would be tedious to relate all the difficulties and disappointments I have had to contend with in almost every part of my district before attaining even the small modicum of success in this direction which I have hitherto been enabled to accomplish."

In No. 8 district, Mr. Doyle reports,—"The proposal to form sanitary districts, to which the Board attaches so much importance, can never be carried into effect in this part of the country without compulsory process." The Appendix to Mr. Doyle's report contains that enlightened and intelligent report from Mr. Dyke, illustrated by a sketch map, to which we have before referred. It was sent in to the President of the Local Government Board in January, 1873.

The report of Mr. F. D. Longe, for No. 9 district, is less discursive and conversational than that of some of the other inspectors; although from the absence of summary or of tabulation it demands a considerable degree of labour on the part of a statistician to arrive at results of remarkably little value, a fact of which we before complained. We content ourselves with citing the remark,—"My information as to the actual work done by the several authorities in my district is not sufficient to enable me to express any certain judgment on the efficiency of their administration, or of their officers." This sentence, in fact, may be taken, with much propriety, as an abstract of the 108 pages which make up the whole blue book before us.

In No. 10 district, Mr. Basil Cane "presumes it is not necessary to set forth in minute detail the actual appointments that have been made, since all the particulars have from time to time been reported to the Board." The contrast presented by this very easy-going view to the elaborate details contributed in districts Nos. 4 and 7, affords a pregnant comment on the absence of systematic direction, which has allowed each inspector to take his own course, however widely it might diverge from that of each of his brother officers. Mr. Cane stands alone in assuring the Board of his "conviction that enormous good has already been done,"—a statement in which we should heartily rejoice, if we had any other evidence than the expression of the conviction in question.

Mr. Hedley, in No. 11 district, "has not as yet had sufficient experience to justify his expressing any decided opinion as to whether 'parochial committees' will be formed to work successfully or not." He has "suggested other combinations of authorities; but in no case was able to bring such an arrangement to a successful issue." He breaks ground untouched by the preceding inspectors, mentioning several points on which he is "in doubt as to the actual state of the law, and on which he should be glad to have the direction of the Board." These points relate to the regulations binding on rural sanitary authorities, their power to order sanitary requisites for old houses, and the classification of the maintenance, repair, lengthening, of an existing sewer" as a special or a general expense. In conclusion, Mr. Hedley expresses his opinion that the returns to be obtained under a circular of March, 1874, will be of very little value, as referring only to paupers, and not likely to be accurate even as regards paupers. The general dislocation of the entire field of inspection is more graphically illustrated by the report of Mr. Hedley than by either of the others, taken by itself. A clear and concise table of appointments, defective only in the absence of summary, is appended to Mr. Hedley's report.

In our copy of the reports in question, pages 106 and 107 are, by some error in printing, blank. We are, therefore, unable to give the outcome of the experience of the forty-four unions, covering 3,401,762 acres, which constitute No. 12 district, on which Mr. B. Fleming reports. He remarks that in comparatively few instances urban authorities have combined for satisfactory appointments. Rural sanitary authorities are, for the most part, more willing to make appointments subject to the Board's regulations. No serious opposition to the Act has arisen in Mr. Fleming's district; although he adds that "it would be too much to hope that all the authorities are working zealously and loyally for the well-being of their districts,"—an apprehension by no means to be confined to district No. 12.

If any person who takes an intelligent interest in sanitary reform can entertain the idea, after the perusal of these reports, that the Act of 1872 is very different from a mockery and a delusion, his views of cause and effect must be different from our own. There is one point, however, which does not come to the surface on these reports (at least otherwise than in a negative form) that is far more vital than are all the indications of want of plan, want of purpose, want of system, and want of organisation that crop out between every paragraph. We are not criticising, let it be remembered, the individual reports. It may well be the case that each of them is the work of an able and educated man, anxious fully to do his duty to his country,—but left altogether at sea so far as instructions as to that duty are concerned. Great research, patience, and skill are manifested in several of the reports; although these qualities, as being unguided by any central principle, are to a great extent misdirected. It would have been more instructive to adopt the worst form of report out of the ten as the model for all, than to invite this perplexing variation of method.

But what is cardinal in the whole matter is this. The ten inspectors all appear to consider that the sanitary officer required is merely a scavenger. A doctor to indicate disease. An inspector of nuisance, at 30*s.* or 40*s.* a week, to detect nuisances, and a scavenger to cart them away! "Make a drain," is the advice. "Where is it to go?" inquires the local authority. "Wherever you like," is the tacit reply. "Somewhere or other—make the drain from the house, and the outlet will take care of itself."

Now, while it is true that the polluting and infecting power of the population of the country is as yet but small if distributed per acre, it is very large when concentrated in any given district, ultimately to be drained by a river outfall. On the one hand we are protesting, very properly, against the wasteful and wicked pollution of rivers. On the other hand, we are calling on all urban authorities to drain their districts. While we insist on these two objects, each excellent in itself, without even contemplating the third part of the problem—the operations to be interposed between taking the sewage from the towns, and conveying, or not conveying it, into the river,—we are really using two Acts of Parliament in order to enforce the construction of enormous cesspools all over the country. From this view of the case there is no escape. Make the drain as long as you like, but stop it up at the end, and you are doing more harm than good, by the concentration of venom.

It is on this view that we have always urged that it is necessary, in the first instance, to have the counsel and aid of the engineer. We cannot recall a single word in the Blue Book, which intimates that either Inspector or Local Government Board has ever thought that any engineering questions were involved in sanitary reform. So long as this is the case it will be an open question whether much of our outlay is not doing more harm than good.

STILL AMONGST THE ACADEMY PICTURES.

MR. FAED in his illustration of Southey's ballad (147) has certainly forgotten that the battle of Blenheim was not fought in England; his "Old Caspar" and the children may be English, or Scotch possibly; they are certainly not Dutch. Of Sir John Gilbert's works "Don Quixote" (540) is very unequal; the knight is very good in his attitude and expression of heroic elevation of sentiment as he finds himself waited upon by the bevy of fair ladies before him; but the spectator rather needs the Don's pre-possession of spirit to enable him to find any interest in the ladies. The portrait, "Mrs. Gilbert" (365), is a kind of "harmony in black and grey," and is well worth attention as an interesting work in a far more delicate style of execution than is usual with the artist. Close to this Mr. A. Moore is represented by three very little works, slight enough; two of which at least, however, show his best qualities, "A Palm Fan" and "Pansies" (353-7); the delicate colour harmony of the former is delightful, and the execution of the latter bright and sparkling to a degree; the titles are of course merely distinguishing names for ideal figure studies. If we pass over lightly the

works of Mr. Cope, which are important as well in subject as in position, it is from no unkind feeling. There is brilliant if rather hard colour in "Anne Page and Slender" (56), and humour, though not of the most delicate order, in the figure of Slender. Mr. Cope is the best,—a good deal the best,—among certain artists whose works are practically an assertion that English painting has stood still for the last twenty years; that all the new and wider aims and desires which the modern spirit has called up are an illusion; that what satisfied us then should satisfy us now. That is simply impossible. Mr. Cope's merits remain what they were; it is the point of view that has changed.

We mentioned Mr. Sant's trio-portrait under the title of "The Early Post" (191). The three young ladies are reading and hearing the letters before sitting down to breakfast; the two younger in white, the eldest in a slightly tinted buff dress which is of use in blending the white dresses of the other two with the rest of the picture. This latter figure is in a rather too stiff and upright attitude; the one seated on the right, leaning forward with slightly abstracted air, is about as charming a figure as Mr. Sant has ever given us: there is what may be called a moral beauty in the whole, too, as illustrating that most pleasing type of girlhood which, in spite of "girls of the period" on the one hand and "women's rights" on the other, is still we trust to be found in many an English home. Of the portraits by Mr. Millais and Mr. Leighton we have already spoken. Mr. Watts is hardly in "first force" this year in portraits; the "Master of the Manchester Grammar School" (193) is a good specimen of his powerful straightforward treatment of a matter-of-fact subject; it has a very "old master" look about it. The portrait of the late Marquis of Lothian, also (420), has the same sort of excellence; the shaggy, unkempt look of the head with its straggling hair and beard, is quite un-English; it may be "Highland," perhaps. As to Mr. Watts's large work, "dedicated to all the churches" (584), we have not yet been able to find out what it means, and every one else seems to be in the same difficulty. Of other portraits of the year there can be no question that those of Mr. Ouless claim the next place. His likeness of his brother artist, Mr. Marks (29), is an excellent specimen of unpretentious yet powerful portrait-painting; easy and effective in attitude, and painted with that happy compromise of manner which suffices to give all the necessary realism to dress and accessories without losing breadth and freedom of touch. The head of Mr. Darwin (155) by the same artist, is one of the finest heads in the galleries, and certainly we should say the most striking work of this class which the artist has produced, and which will thoroughly confirm his rising reputation as a high-class portrait-painter. Mr. Lehmann's "Robert Browning" (90) is very hard, and, as a painting, is quite inferior to the works just named; but the attitude is fine and characteristic, and the alert upward glance of the countenance very well given. The big "Testimonial Hunt-picture," by Mr. Wells, "A November Morning at Birdsall House" (112), with portraits of Lord and Lady ———, and the Hons. This and That, is a sort of thing one cannot see here with equanimity. Not that the picture is entirely bad of its kind—at least, we have seen worse,—but why hang it at the Academy, to cover yards of wall-space with what is (as the advertisements say) "of no value to any one but the owner"? Mr. Archer's name is appended to a portrait of Professor Blackie, enveloped in a cloak, and majestically posed for the occasion with his foot upon his native heath. A more theatrical portrait has seldom been seen, but the artist is possibly not the person to "bear the wyte" of that. His portrait of "Mrs. Boughton" (194), a quarter length, is a very good painting of a very interesting and expressive head; and there is a good deal of character and individuality in the portrait of "Mr. Barton Scobell" (213). Mr. Orchardson sends two portraits, remarkably original in treatment (70 and 559), in which his scrambling style of manipulation is much less objectionable than in the case of smaller figures, and, in fact, contributes a good deal to the effect of these two works, which are quite out of the beaten track of portraiture. Mr. Pettie's "Portrait in the Costume of the Sixteenth Century" (318), a half-length of a man in a dark-velvet dress, with a rather overstrong light on the face, should be looked at; as also a portrait (418) by Signor Perugini,—a head of a lady, in a rather antique style, and very agreeable in colour.

The finest landscapes this year are sea-pieces, which is perhaps a rather Irish way of putting it; but there can be no doubt that the most powerful and successful work of this class is Mr. Brett's "Spires and Steeples of the Channel Islands,"—a repetition of, or rather improvement upon, the "Scilly Isles" of last year; an expanse of "wrinkled sea," calm, bright, and sparkling under a summer sky flecked with light clouds, the half-reflections of which serve to aid the perspective of the surface, which, seen from a height and with a high horizon, is at last lost in a hot hazy distance where sky and sea blend. The rocks in the foreground and middle distance (the "spires and steeples") are painted with wonderful force and solidity, and the whole effect is so luminous that on a bright day it seems full of positive light rather than pigments. Astonishing as it is, however, this is a type of art which has its limitations, and we do not think the artist can go further with it, and should rather prefer to see him turning his attention to another phase of marine effect next year. Mr. H. Moore, who paints the movement of sea-water this year, as Mr. Brett paints its lights and reflections, has two works in his best style, and which indeed he has seldom equalled. "Outside the Harbour" (1176) the coaster "Fortune" has been stranded and abandoned, and rolls about half aground amid the breakers, one of which comes down in a seething mass of foam on the right; the movement of the water which swirls off over the shoal to the left is given in a masterly manner. But the quieter and smaller work, "Summer Moonlight in the Downs" (429), though less striking at first sight, is perhaps the finer of the two; the soft sway and curve of the nearly calm sea under the moonlight, in the foreground, is given with a perfection which implies the closest study; one can almost see the water rise and fall. After these, perhaps one of the most successful landscapes of the year is the tumultuous scene painted by Mr. Macwhirter (503), with the line,—

"Land of the mountain and the flood,"

by way of title; this, which represents an autumn torrent in Scotland in full roar, with a wet distance of rain-enveloped hills, is a very fine free painting, conveying thoroughly the feeling of the scene; it has been effectively hung to balance Mr. Brett's picture; the two make a fine contrast, though we will not say the balance is even. Mr. P. Graham shows a little too much of picture-making in his "Crossing the Moor" (81) with its foreground of rough cattle; there is fine work in his best manner in the distant effect, but we incline to prefer "Twilight" (566), a moor with a horseman in the foreground endeavouring to extract meaning from a very dilapidated finger-post; the ragged driving clouds, their lower surfaces touched with a heavy dull red from the last ray of the sun, give the prevailing sentiment to the picture. Mr. Poole's "Vision of Ezekiel" (129) we must consider a mistake; it is neither vision nor landscape, but an inextricable entanglement of both. In "the Entrance to the Cave of Mammon" (261: see the *Faerie Queene*) his genius for weird and romantic landscape is shown with characteristic power; a deep rock-walled lake is the scene, with a sitting figure in the foreground; the whole in that mysteriously toned half-light in which the artist excels. Then we come to some landscapes to which the smell of paint still clings, more or less. Mr. Smart, in his large scene called "The Gloom of Glen Ogle" (517) has made great efforts to escape from paint, but has scarcely succeeded; it is a fine study of a portentously gloomy scene, however. Mr. Vicat Cole is one of those artists who prefer paint deliberately; he lets you see "how it is done"; his "Richmond Hill" (237) as a portrait landscape is most successful; it is, as Thorncliff Osbaldistone would have phrased it, "woundily like" the place, and effective at the same time. His "Loch Scavaig" (513) is one of those works before which the unthinking public invariably exclaim "Oh! this *is* fine!" but the more cautious judgment of "the critic" will not be so readily floored by it. We were quite forgetting, by the way, Mr. Alfred Hunt, who says "Summer Days for Me" (1,199), in a large view of a pasture half shadowed by a purple hill, with the bed of a brook in the foreground; a respectful consideration of its effect and manner of treatment suggests, however, the conclusion that Providence intended Mr. Hunt for what he is,—a great water-colour artist; his oil-paintings tend too much to the effect of water-colour on a large scale; and though never without remarkable qualities, do not show him at his best. We notice a good landscape by Mr. Macbeth, the rather as we have had frequent occasion to quarrel with him in these columns; but "Ca' the Yowes to the Knowes" (286) is a fine, broadly-painted piece of undulating common, rising from the foreground, with a powerful little bit of distance behind. Nearly opposite this is "A Lone Shore" (350), by Mr. A. D. Reid, an expanse of marshy shore, with a strip of very dark sea beyond; it is not a picture that attracts, but there is something in it,—a kind of power akin to that of the Belgian painter, Ducker, in quality at least. Mr. Raven is provoking; he has contributed very beautiful landscapes of a quiet idyllic character, in previous years, and with a manner and feeling of his own; his more ambitious work, "The Heavens declare the Glory of God" (128), cannot be called a success, and is far too large for the subject. "The Quarries of Holme Ground" (231) is a much more successful picture, but not very interesting in subject. We should be glad to welcome the artist again on his old ground.

Mr. E. W. Cooke, besides a charming specimen of his well-known style of coast scene, "Sandy Cove: Tide flowing" (369), very bright and clear in tone, sends two works of exceptional character (for him), one a picture of that useful but not ornamental ship (if such a thing can be called a "ship") the "Devastation," as she appeared on the occasion of the naval review in honour of the Shah; the masses of smoke from her guns are made use of to secure an effect, and Mr. Cooke has shown his power in producing a fine work under difficulties. The other work is a remarkably glowing Nile picture, "The Mountains and Plains of Denderah" (443), the river in the foreground, the trees on the opposite bank looking like bronze against the western sky, the tone of which is repeated in the water; the effect recals some of those in which Mr. F. Dillon used to delight, but more intense; northern spectators would say it was exaggerated, but tropical people know that it is not. Mr. Linnell also contributes a landscape, "Woods and Forests" (314), as good as any which he painted at the commencement of the present century; and perhaps there are few instances of a style persevered in for so long, with little or no modification, still holding its ground so well in the estimation of artists, as well as the public. Mr. Oakes's "Fallow Field" (481), though a little hard and metallic in its glitter in parts, shows fine feeling and execution. A very carefully composed and executed work is "The Horse Dealer" (69), by Mr. C. E. Johnson, which balances Mr. Graham's "Crossing the Moor"; a train of horses move from the foreground towards a village in the distance, along a road half hardened by a light frost on an autumn evening. This appearance has been very carefully studied; a mass of trees fills up the composition to the right; in a quiet way this is a very thorough bit of work. In the same room, too, we notice an original thought in Mr. C. Hunter's "Hours of Rest" (30), where three empty fishing-boats rock lazily about near the beach, on a sea painted with considerable breadth of manner, though a little uncertain in tone. Mr. Knight's "Sandy Slope" (20), and "The End of the Wood" (152), by Mr. Farquharson, are also noticeable, in very opposite ways, for that unity of treatment in which everything is subordinated to a predominant effect, which does so much to give interest to many an otherwise apparently unpromising or slight subject.

Giving a final look round, we find we have omitted to mention Mr. Wallis's very good work, "Fugitives from Constantinople, 1453" (386), the scene being laid, as in his works of the last two years, in Venice, the picture being again a study of two figures, in the costume of the period, against a background of architectural detail, carefully and brilliantly painted. The artist has contributed a new item and a new manner to the annual exhibitions, but it seems in danger of becoming too much like a receipt, repeated in a slightly varying form. We must do to Mdlle. Henriette Browne the justice which others have not done her, in hanging aloft in a corner her admirable though simple work, "The pet Goldfinch" (239), a figure of a young, plain, but interesting French girl, busy over her studies at a table, with the bird perched by her, the whole remarkable for quiet force of colour and breadth of style. Its position is a pretty specimen of the sort of compliment an able foreign artist may expect from the Academy: the contrast between this and some of the works on the

line near it would be ludicrous if it were not discreditable. What must French artists who visit the exhibition think of us? Mr. Le Jeune's "My little Model" (355), is one of the nicest of his nice little children. Mr. J. D. Watson's "Gleaner's Harvest" (19) is not a picture that strikes one, and yet it is quite worthy of the author,—a single figure of a woman, shaking out the proceeds of her work from her uplifted hands; there is a quiet pathos in the expression of the face; it will repay more attention than it excites at first. In "From his Flocks strayed Corydon" (490), Mr. T. Graham shows a scene of rustic love-making, in which the two figures are marked by a simple and natural elegance of design which removes the work entirely from the commonplaces of "rustic courtship" scenes, and yet is quite unpretentious and unexaggerated: the execution is very broad and free. Something rather new, too, there is in Mr. Sadler's "Steady, Brother!" (450), two piscatorial monks, one of whom is going to gaff a salmon which the other is with some difficulty holding in from the bridge. A rather large picture by Mr. F. Morgan, "The Emigrants' Departure" (1,168), though a little too extended and straggling in composition, shows much feeling and fine drawing; a group of villagers on the road who have accompanied their departing friends partway, watch the receding wagons with various shades of sadness: some of the figures show considerable beauty of design, and recall a little the feeling of that gifted and lamented artist, H. Mason. Mr. Aumonier, whose artistic position seems to be on the rise, sends a very good work under the title "Spring: Peeling Osiers" (598); a flat quiet landscape, a little suggesting Constable in his quieter manner, with a row of girls near the foreground peeling the osiers along the line of a post-and-rail fence, which they lean against in different attitudes; the figures are designed with much variety and spirit, and the whole is very complete and harmonious, in a low key. Though we expressed a dislike to the prevalent "shaving" pictures of the year, we must compliment Mr. Burgess, who for some years has perseveringly repeated Spanish subjects of very mediocre interest and treatment, on having achieved real humour and point in "The Barber's Prodigy" (107), with a freer and more effective style of execution than before. Mr. Barrable contributes two small works of merit, "April Showers" (137), a half-length of a pretty little girl seated under the shade of foliage, and "The Prelude" (435) played on the piano by one young lady to another standing by: the colour is effective and the figures very pleasing. Mr. R. N. Waterhouse shows some novelty of manner and feeling in his ideal figures "Miranda" (76) and a group entitled "Whispered Words" (260); with, however, a tendency to a rather disagreeable yellow tone in the draperies. Talking of colour, there is Mr. W. V. Herbert, who has not startled us by such an array of prismatic colours as he did a year or two ago, but whose "Misery and Joy before the Altar of the unknown God" (387) shows similar characteristics,—a desire for a striking and telling subject, and a tendency to theatrical contrast of colour. In this case there are two worshippers before the altar, a wretched cripple in rags, and a young bride (probably) in pink and white: there is nothing in the architectural background to indicate ancient Athens. Still, we are disposed to welcome all attempts to rise above the commonplace level in regard to the subject matter of pictures; and if Mr. Herbert can control and restrain his prismatic and theatrical tendencies, we expect he will do something. In a small picture by Mr. J. Grey, "The First Touch" (919), there is a genuine humour; an Irishman of the most pronounced "Paddy" type has given the first dash of whitewash to the outside wall of his cabin, and stands back to judge of the effect, with the air of an anxious and critical connoisseur. This work reminds us of the sort of thing Mr. Erskine Nicol used to do before he took to painting in so much larger and (in every way) coarser a style. Near this Mr. V. W. Bromley has been considerably ill-treated; his clever and curious little work, "Midday Rest,—Sioux Indians" (914), having been hung where it could only have been noticed by accident, in a corner of the "lecture-room." In another corner Mr. Hemy has a good study of river craft, "Herring-boats towed into Shields Harbour" (874). A head of an old man, called simply, "Study from Nature" (419), by Mr. G. E. Hicks, is very good; and in a very different way there is good art in Mr. Wirgman's sitting half-length of a lady embowered in foliage, with the title (from Andrew Marvell) "A Green Thought in a Green Shade." Among some small works of considerable interest and excellence, we may mention Mr. Gale's "Going in for the Competitive" (628), but too true to fact in the figure of the poor jaded youth trying to keep awake over his "cramming," with the litter of study books about; the details are very carefully finished: Mr. E. A. Mulready's "Little Creditor" (599), trying to reach up to the knocker with the account-book which she brings,—an eye should be kept on Mr. Mulready, who is doing credit to a good name: "Private and Confidential" (375), by Mr. J. Clark, representing two little schoolgirls, perched on a seat with their slates, exchanging some important secret; a charming study of child nature. Mr. A. Dixon's "To be Left till Called for" (83), a little girl in the waiting-room of a station surrounded by boxes, and discussing a bun with a most amusingly demure and philosophical expression: and "Oxford, 1650" (93), by Mr. G. Lucas, a small interior of a college-room, with a student of the period indicated,—a very effective little work.

Subsequent inspection has quite confirmed us in the opinion we expressed in our first notice, that, without any decidedly great pictures, the general interest of the exhibition, in regard to variety of subject especially, is rather above than below the average.

"LOHENGRIN" AT COVENT GARDEN.

THOSE of our readers who pay any attention to matters in the operatic world are aware that a work is being introduced in London this season by a composer who claims to be a revolutionary reformer in opera, and to put its philosophy on a new footing. The charge of Wagner against nearly all existing opera is that it is a mere peg to hang music and scenic effect upon; that the story and situations, which should be the basis of the whole, are made subservient merely to the display of musical ability on the part of the composer and the executants, and that elaborate compositions are introduced by which the action of the piece is illogically delayed where it should proceed without let or hindrance. He aims, in fact, at bringing opera nearer to the condition of musical drama, in which the action and words go on almost continuously, as in an ordinary play, with a musical setting running parallel to and illustrating, but not interfering with, the progress of the story. He is author of his own *libretto*, and by his theory words and music, situation and stage effect, are to be blended into a homogeneous whole, no one element predominating over the rest, but all contributing in an equal degree to the total effect.

This, of course, puts opera on a very different footing from its ordinary one as a professedly musical performance. There are no great airs in which a *prima donna* can exhibit her powers of vocal gymnastics, and no great musical scenes which can pass without deterioration from the stage to the concert-room. The true significance of the music (though it has its positive beauties in not a few places) lies entirely in its relation to the stage action and the characters. An opera so constructed necessarily demands great attention to *ensemble*, and the romantic legend on which "Lohengrin" is founded, placed as it is at a date (the tenth century) which gives opportunity for any possible amount of display of semi-barbaric Mediæval splendour in dress and pageantry, is well calculated to bring out the resources of such a house as Covent Garden, always noted for the lavish manner in which scenic effect has been provided for when the nature of the opera demanded it. In this particular case, the splendour and picturesque character of the dresses, in the scenes where the stage is full, realise an effect not to be forgotten, and worth the attention of artists whose sympathies are with strong and brilliant combinations; the manner in which the masses of performers enter upon the scene heightens the effect, for Wagner, whatever else he is not, is a master of scenic effect and climax; and the scene of the procession to the church before the wedding, when the stage gradually fills with one splendidly-attired group after another, to an accompaniment of very charming processional music, till the square and the steps and the balconies are crowded with figures in glistening armour and bright colouring, is something to remember. Stage architecture is slow to improve, we admit, and things appear among the buildings in this scene which are certainly "not of the tenth century," if of any; and some which are decidedly of the thirteenth. The first approach of *Lohengrin*, in the chariot drawn by the magic swan, is a remarkable piece of effect, the chorus exclaiming in a more and more tumultuous and excited manner, the tones of the band rising into a tempest of sound, till the dullest spectator is fairly carried off his feet by the tide of enthusiasm.

The part of *Elsa*, the heroine, was beautifully taken by Mdlle. Albani, whose clear and pure voice went through all the difficulties of the music with entire ease and smoothness; among other points, her meditative soliloquy and prayer on the balcony in the second act delighted the audience; and the long duet between the hero and heroine in the last act is very beautiful, and was given with much feeling, but we fear it cannot be said that the part of *Lohengrin* (Signor Nicolini) is in over-fit hands. Mdlle. d'Angeri distinguished herself as *Ortrud*, the "wicked woman" of the piece, and Signor Capponi in the music of the herald; and the parts of the king and *Frederick*, the weak husband of *Ortrud* (a sort of miniature *Macbeth*) were ably sustained by Herr Seidemann and M. Maurel respectively.

It must be said, however, that the intention of the composer is not yet fully realised in the action of the chorus and "supers," who ought to be in continual and evident interest in the whole piece, whereas they mostly stand about in the old fashion and sing their parts; and many effective passages in the music which are intended to accompany the action and expressions of the mass of the spectators on the stage lose some of their effect in consequence. Of course this kind of perfection is incompatible with the demands of an English opera season, where a different work is expected night after night, and there is no time for devoting such an amount of rehearsal as Wagner's scheme really demands; but until this is done, the composer's intention will not have been fully realised.

Signor Vianesi deserves the highest praise for his painstaking and careful conducting,—and conducting a Wagner opera is no joke. There was a tremendous and a very enthusiastic audience; but the system of applauding the principal singers on their entrance seems to have been quite put down by the Teutonic contingent. If English audiences are thus taught to think more of the composer, and less of the executants, a point will have been gained; and whatever the ultimate verdict on Wagnerian opera, we suspect its immediate influence will, on the whole, be a healthy one. The work is to be repeated on the 28th. Musical London owes thanks to Mr. Gye.

SCULPTURE.

MR. LOUGH is executing some large and important groups for piers on the terrace at Toddington, in Gloucestershire, the seat of Lord Sudeley. Each group consists of a male figure in powerful action with an animal of some kind, buck, boar, or dog, hunting and rural occupations being typified. The majority are already executed in Sicilian marble, and will soon be removed to their destination. They exhibit a sort of nobleness and grandeur not often found in works executed to-day having a similar destination. Toddington, some of our readers may not know, was built about forty years ago from the designs of the Lord Sudeley of that time. It is in the Perpendicular style, what, indeed, may be called the *very* Perpendicular style, and is illustrated in a quarto volume by the late John Britton. In this chatty book, which treats of everything and everybody, and has on the title-page the date 1840, Mr. Britton mentions a niche at the bottom of the stairs as containing the statue of a monk by Mr. Lough, and, in a note, mentions the difficulties under which the sculptor commenced his career and expresses well-deserved admiration for his statue of Milo, which first brought him into notice. It is interesting to find the sculptor again at work for a succeeding Lord Sudeley. In Mr. Lough's studio will be found many proofs of his continued devotion to poetical sculpture.

Proposed New Pier at Ryde, Isle of Wight.—Meetings have been held in favour of the establishment of a new pier at the eastern side of the town, for the accommodation of the railway traffic passing to and from Ryde. The probable cost of the works has been estimated by Mr. Hamilton Fulton, the engineer at 100,000*l*.

THE TEACHING OF PHYSICAL SCIENCE.

THE science of Physics is very interesting in its study and very useful in daily life, but it is difficult to teach, because of the impatience of the pupil, who, in our country and in our day, learns a science with the intention of making money by it, and he wants to grasp the results of teaching without the trouble of going through all the processes of reasoning from step to step, making sure of each before he takes the next. But it is only by this means that he can ever arrive at a sure conclusion. To suit the commercial notions of our country at present, many teachers adapt their manner to the wants of their pupils, without—as it would appear—any consideration of their responsibility to posterity. To slur over difficulties, and make the worse appear the better reason, seems to be nearly all their aim; so only that the pupil may pass through some examination into practical life. The results we see daily in wrong-doing. And it is unfortunate that this should be so with us, for what we do is propagated through nearly all the world, and it is a woeful contemplation that we promulgate error and sham ways of doing things. For "physics" we may substitute "laws of nature," and we may divide all affairs of life into two classes; those of nature and those of morals. Possibly the methods of teaching morals and physical science are essentially different, and may be opposite; but whether it be the teaching of morals or of physics it should be the teaching of a master; and the greater the master the more simple his teaching will be, in all probability.

The knowledge of science which we can acquire is of less importance to us than are the means by which we acquire it, and it is in this especially that we desire the teaching of a master. We think we discern in Weinhold's "Experimental Physics"* the method we desire. The illustrations of physical phenomena are very well made, the pupil being shown how to make the tools and implements with which the experiments themselves are made. Thus the professor does not try to force upon the mind of the pupil an abstract conception of a truth in science, but presents to him an interesting series of small truths which lead up to the knowledge which it is desired to convey.

It is shown, for instance, that not only solid bodies have the property of *cohesion*, but liquids also, in a small degree, and that liquids assume the form of a sphere when uncontrolled by other force than that of their own cohesion. Poured from a vessel, a liquid breaks up into single drops. Without cohesion water poured from a vessel would not form drops, but extremely fine particles like dust. "A small, dry needle placed horizontally upon water will not sink, because its small weight is not sufficient to overcome the cohesion of the liquid particles at the surface, and to break through them. But if the point is immersed, the needle immediately sinks; this proves that the needle was not swimming upon the water, but was prevented from sinking by the cohesion between the liquid particles."

Gaseous bodies have no cohesion, but, on the contrary, it is only by force that the separation of their particles can be prevented. Solid bodies,—or, preferably, rigid bodies,—have the property of cohesion of their particles in a high degree, and their form or shape can only be altered by considerable force. The *porosity* of bodies is an important property to be considered. Between the particles of matter of which a body consists are pores, which in some bodies are plainly to be seen, while in others they can only be seen with a magnifying glass; and many other bodies, even when thus examined, present no visible pores. Nevertheless, such interstices exist, although they are very small. Thus hard stones are often coloured for commercial purposes; this would be impossible if the colouring matter could not penetrate into their pores. Again, by using great pressure, liquids may be forced even through metals." And even in liquids, where we should least expect pores, their existence may be demonstrated. The smallest indivisible particles of a body are called molecules, and the forces of cohesion and expansion, which induce these particles to cohere or to recede from each other, are consequently termed molecular forces. If once the particles of a body be separated beyond the very minute distances within which the molecular forces act, the cohesion is destroyed, and the particles will not again manifest mutual attraction; but they may be made to stick together, by preparing their surfaces, and this kind of attraction is called *adhesion*. As a consequence of their mobility, liquids manifest strongly the force of adhesion, for they come into close contact with the solids, whatever the form of the latter bodies. A hand dipped into water and withdrawn, is covered with adhering drops. A drop of water placed between two adhesion plates causes them to adhere much more firmly. *Capillarity* is another force, with which porous bodies act upon liquids. It is from this cause that water rises in wood, sponge, sugar, blotting-paper, or oil in the wick of a lamp. *Endosmose* is a remarkable phenomenon. "When walls of certain substances, such as gypsum, unglazed and slightly burnt clay, parchment paper, animal membranes, &c., which permit the passage of liquids through them, are interposed between two liquids, they present less hindrance to their mixture than difference in the specific gravities. When two liquids are separated by such a wall, the peculiar phenomenon is observed that the liquids pass through the partitions at unequal rates, and that consequently the quantity of liquid on one side of the wall increases, while that on the other side becomes less." The same kind of diffusion takes place between gases of unequal specific gravity, and more rapidly than between liquids, if they are separated by a porous partition. It is usual to denote this kind of action between gases by the term 'diffusion,' while the analogous phenomenon in the case of liquids is commonly spoken of as "endosmose." Gaseous bodies adhere strongly to solid bodies; they are said to be attracted and held so strongly by solid surfaces, that a kind of condensation takes place. This kind of attraction is especially remarkable between carbonic acid and charcoal. A piece of charcoal absorbs a volume of carbonic acid many times larger than itself. "A similar attraction takes place between the molecules of liquids and gases; liquids are equally with solids capable of absorbing gases. The absorption of a gas by a liquid is mostly called solution. Water dissolves various gases in different quantities, but of the same gas there is always less absorbed by hot water than by cold water. Fresh spring water contains a quantity of air in solution; if it is allowed to stand in a glass, in a room, so that it gradually becomes warmer, a portion of the air separates in small bubbles which adhere to the sides of the glass. A liquid is capable of holding greater quantities of a gas in solution when under great pressure than when the pressure is diminished. Hence a diminution of pressure has the same effect as an increase of temperature.

How *mechanical work* is performed is thus explained. "A body at rest offers resistance to being set in motion. This resistance is greater the greater the mass of the body. Conversely a moving body offers resistance to being brought to rest. This resistance is also greater the greater the mass of the body; but, besides it is also greater the more rapid the motion. This property of bodies to resist changes of state is called their *inertia*. If inertia or any other resistance is overcome, mechanical work is performed." In lifting a body work is done. We overcome in this case the resistance of gravity. If other circumstances are equal, the work will be the greater the higher the body is lifted, or, in other words, the greater the space through which the resistance of gravity has to be overcome; and the work done is directly proportional to this space. The law of falling bodies is fully investigated here, and it is found that the quantity of work which a falling body contains is exactly the same as that which would be sufficient to raise it to its original height. This fact cannot well be proved in the case of bodies falling freely; but it may be demonstrated by means of bodies which are allowed to descend by the force of gravity through an arc of a circle, being held up to the point of suspension by a string,—the action of the pendulum; and it is found that the law here observed with circular arcs of various forms holds good with all kinds of spaces traversed. "The velocity acquired by a body which moves under the influence of gravity is independent of the form of the path traversed. It is solely dependent upon the vertical height of the space through which the body has passed." As we proceed with our investigations in science, providing we follow the sure and unerring path, we can from time to time cast off terms which may have served, perhaps, some useful purpose, but which do not convey the true idea of what is meant. Thus we have been taught to call the lever and other simple machines "mechanical powers"; but they possess no power,—they are only the means of changing the motion of power. As the author says, "None of these machines can generate work nor increase it: on the contrary, they all involve a certain loss of work, which is expended in overcoming the resistance which the force of friction opposes to their motion. The advantage of a machine consists in the conversion of work, which is given in an unavailable form, into an available form."

About eighty pages of the book are given to an explanation of the phenomena of sound,—those numerous actions around us which we perceive through one particular organ of sense, the ear. When these actions are examined as to their physical nature, it is found that they all consist essentially in *motion*. The propagation of sound, the conduction of sound, and the reflection of sound, are interesting subjects of study; so are the phenomena of light. Electricity also, as being an important part of physics, is widely treated by Professor Weinhold. Finally, he treats of heat. We have been accustomed to reckon degrees of heat by Fahrenheit's scale. Thus we say water freezes at 32° and boils at 212°, but for scientific purposes the scale of Celsius is better, and is now mostly used. Its zero is the freezing-point of water, and the space through which the mercury of a thermometer is expanded by the heat of boiling water is divided into 100 parts, and it is called the Centigrade scale. Degrees of heat less than the freezing-point of water are denoted in the Centigrade scale by the minus sign; thus, 5° below freezing-point is written $-5°$ C. The zero of Fahrenheit's scale is $-17{\cdot}77°$ C. To convert any number of degrees Fahrenheit into degrees Centigrade, the number 32 must first be deducted, and the remainder multiplied by $\frac{5}{9}$, thus $149°$ F. $= 117 \times \frac{5}{9} = 65°$ C. Heat expands all bodies, liquids more than solids, and gases more than liquids. Solid bodies which are heated do not increase their volume to any considerable extent, but the force exerted in expanding is very great, for it is equal to the external force required to compress the expanded body to its original volume without altering its temperature, and the expansion is therefore in many cases of great practical importance, as in drawing together parts of a structure which have bulged out, by alternately heating and cooling iron rods. Heat applied to one part of a rod of iron flows along it to neighbouring parts which are colder. In the same manner heat flows from one body to another, provided they are in contact with each other. This kind of transmission of heat is called *conduction*. Conduction takes place in different bodies with very different velocities; hence bodies are distinguished as good conductors and bad conductors of heat. Bad conductors are used for preserving the temperature of bodies; that is, either to prevent abstraction of heat by colder bodies in their neighbourhood, or accession of heat from without if the body is at a lower temperature than those in its vicinity. Liquids are bad conductors, with the single exception of the liquid metal mercury. A body of water is heated through, not by the conduction of heat through its particles, but by *convection*. Heat being applied to the lower part of a vessel containing any liquid, the particles nearest to the bottom are expanded by the heat, and become specifically lighter than those above, and rise through the mass to the top, colder, and therefore specifically heavier particles sinking and becoming in their turn heated, so that by a series of ascending and descending currents the whole mass becomes heated. "Air and all other gases, without exception, are bad conductors, and a flow of heat can only take place through them by an actual movement of their molecules, which must be produced by heating that portion of a gas which is lower than the remainder; the heated molecules thus become less dense, and rise, while the heavier portion gradually descends and becomes heated in turn. A space filled with air cannot be heated from above, for the heated molecules in the upper portion of the mass remain where they are, while those below them remain at rest, and become heated only very slowly. When the motion of gaseous molecules is restrained, they do not convey much heat, even if they are heated from the side or from below. The free motion of the air in a given space may be prevented by dividing the whole space, by partitions, into numerous smaller spaces. A free current is no longer possible

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* Introduction to Experimental Physics, by Adolf F. Weinhold; translated and edited by Benjamin Loewy, F.R.A.S.; with a Preface by G. C. Foster, F.R.S. London: Longmans, Green, & Co. 1875.

under these circumstances, and such a space could no longer be heated even by convection. It is in this way that substances like fur, feathers, ashes, fabrics, straw, &c., become bad conductors; the air remains stationary between their particles, and offers thus great resistance to the propagation of heat by preventing a free circulation of heated molecules."

POLLUTION OF RIVERS BILL.

The Bill presented by the Marquis of Salisbury, intituled an Act for amending the Law relating to the Pollution of Rivers, is a much more important measure than a cursory glance at its seven pages might lead the reader to imagine. It goes straight to the point, in the manner of the foreign codes, rather than by the cumbrous and time-honoured circumlocution dear to English lawyers. Whether people admire the measure, or whether they oppose it, there can be no pretext for misunderstanding it. It is a genuine and nervous specimen of what we have so often desired, a chapter of English law, expressed in vernacular English, in such wise that no man of ordinary intelligence and education can have any doubt as to its meaning. If it pass without being complicated and made ridiculous in committee, it will be a measure of law reform of signal promise.

Thus much as to the form of the Bill. As to its essence, it is as follows. It is divided into the declaration of law, the provisions for administration of law, and the technical directions as to legal proceedings, saving clauses, and definitions. It applies to Great Britain, but not to Ireland.

The declaration of law is this. The putting into any stream solid refuse, rubbish, cinders, or any other waste or putrid matter, so as to interfere with its flow, or to pollute its waters, is an offence against the Act. So is the drainage of sewage into any stream by any channel constructed later than Jan. 1, 1875. So is the drainage of any polluting liquid from any manufacture or mine which has not been in operation for twelve years before the passing of the Act.

In cases of existing drains, conveying sewage, the parties responsible are bound "to use the best practicable means to detain or render harmless the flow." Any noxious liquids from manufactures now in existence, but erected within the last twelve years, have a grace of two years, if such practicable means are adopted. All drainage from works of more than twelve years' standing is to be subjected to the same provision, that of the use of the best practicable means. The Bill might be further simplified and shortened by consolidating clause 4, relating to manufactures, with clause 5, relating to mines. The provisions are identical; and the clauses can only have been inserted in duplicate in anticipation of opposition from separate interests.

No doubt such opposition will be raised, on the pretext that it was the duty of the legislation to define such best practicable means. This, of course, can only mean that the Bill should be shelved for another quarter of a century. In defining clearly what can be defined, and in leaving fully open to the discussion of the tribunals the practical question of what can be done in each case, the framers of the measure have taken a course which is not only sound, prompt, and practical, but is inspired by the very genius of the common law of England.

Under the head of Administration of Law, it is provided that local authorities shall give facilities for manufactories draining into sewers; compensation, if any, to be settled by arbitration. Sanitary authorities are empowered to enforce the Act in their respective districts. The Local Government Board is empowered to enforce the Act, in case of need.

A provision which has been long demanded for the satisfactory discharge of the duties of Sanitary Authorities is contained in the ninth clause. In a modest form it is really a substantial enactment, the due observance of which would remove much of the anomaly that now impedes the course of sanitary improvement. It is, in fact, a provision for establishing our own scheme of water-shed districts.

The Local Government Board is empowered by this clause to constitute, by provisional order, a conservancy authority for the whole of the catchment area of any river and its affluents, and any conservancy authority shall have the like powers for enforcing the provisions of this Act as sanitary authorities have, as before provided. The conservancy authority is to be constituted of representatives of the several sanitary authorities having jurisdiction within their area, the constitution of the new authority being regulated by the Local Government Board.

In this simple clause is contained, in effect, the most important amendment to the Public Health Bill that it is practicable to frame. The wisdom and propriety of making that measure, which is necessarily so voluminous, merely consolidatory, is thus amply vindicated. The conservancy authorities, if the country be parcelled out among them, would be the natural and proper authorities to decide on the general plan for each district, in harmony with which every subordinate sanitary work within its area should be conducted. It is only necessary to add that each conservancy authority should have a responsible engineer, and that the Local Government Board should provide for the co-ordination of the reports, plans, and proceedings of the various conservancy authorities.

Either in the present measure, or in a subsequent enactment, it might be necessary to give further powers to these conservancy authorities as to authorising irrigation; and as to dealing with mills, weirs, and other obstacles to the healthful drainage of our great river valley.

Offences against the Act are to be restrained and punished by summary order of County Court. The powers given by the Act are cumulative, that is to say, that they are given in addition to, and not in derogation of, those conferred by any other Acts of Parliament. The Thames and Lea Conservancies, and the Metropolitan Board of Works, are not to be prejudicially affected by the Acts.

A CITY OF THE FUTURE.*

LETTERS FROM SHAKSPEARIA BY SCAMOZZI SMITH, ESQ., ARCHITECT.

Written to his Friends in London during the Summer and Autumn of 1915–16.

My Dear ——,—We went yesterday to see the docks of Shakspearia, which are built round a small gulf running deep into land at the mouth of the Jasper, of about eight miles circumference, and forming with their various accompaniments a fine natural and artificial harbour. They are planned with the utmost ingenuity of contrivance with respect to all needful classification of vessels, and many of them are surrounded by lofty warehouses coming down close to the water's edge; and the rest are enclosed along with their quays and sheds by lofty and strong fence walls to defend them from the winds. They have underground or overground communication with all the railways.

No sooner were we within sight of the works than we were charmed with their appearance, for nothing can be more picturesque or pleasing than the skyline of the whole semicircular range formed by the rising and falling of warehouses, enclosing walls, towers, masts, &c., from whatever point viewed. But this pleasure was nothing to what awaited us on a near inspection of them, which showed that both science and art had invested them with their charms.

This is due, I am told, to the taste and munificence of the great shipowners, who were solicitous that the entire dock-works should not only be equal to the material purpose for which they were built, but that they should be invested with the utmost amount of architectural beauty for the sake of its elevating and refining influence and effect on the mind of the seafaring man. Nowhere do you see anything resembling the long dreary dead fence walls and monotonous unadorned warehouses of English seaports, disfiguring alike to the river and city. Strength not only exists in these great fence walls and buildings, but it is vividly expressed, as in the organic structures of nature, by every means, as boldly projecting plinths and pedestals, buttresses, bold set-offs, and horizontal rustication,—elements displaying the principle of an inner life that gives relation to the different parts of a construction, and raises it from the condition of inert matter to affinity with the higher works of the Creator. They exhibit not only dynamical skill but many of the beauties and graces of architecture, which render the whole a most charming sight. The colossal scale and strength required in them has naturally led to a style of composition and decoration something like the Egyptian, a style in which the loftier conception and imaginings of the architect have found employment, and enabled him to exhibit that natural and just perfection,—that Herculean grandeur which arises from the union of strength and beauty.

It is only, however, in artistic beauty that these docks excel your celebrated works at Liverpool and Birkenhead, which in engineering skill are quite equal to the Australian. But in this the difference is immense, for they are almost as beautiful in Australia as if beauty was their sole object. It gives a great charm to these marine works. Here art lifts up her voice and cries as loudly in the docks as in the streets, and is as eloquent among the ships as among the shops, while everywhere is architecture proper blended with constructive science, and outward beauty goes hand in hand with innate strength; cultivation of the sense of beauty in seamen and mercantile persons frequenting these docks being considered as important as in any other class of persons; on the principle that he who wishes to penetrate the recesses of the vulgar soul must do so by securing the co-operation of the eyes or other of the senses, as the media of communication with the mind.

Another advantage they have over the Liverpool docks,—by being detached from the city they do not interfere in any respect with either beauty or convenience in the city as they do in Liverpool. Docks and warehouses being outside the city, the pleasures and sanitary advantages of the river are reaped by every class of the community; the more so as everywhere towards them the streets and houses put on their best and fairest aspect. Traverse the city by water as far as you will, you nowhere see the banks disfigured with warehouses, coal-wharfs, or ugly buildings of any kind. But everywhere stately palaces and mansions of the nobility and gentry, halls, galleries, churches, or their accessories greet the eye, and remind you of the grand canal at Venice; and the scenes afforded from the bridges along these ever-winding streams, animated as they are by gaily-painted and rigged boats, are not to be equalled for beauty in any city of Europe. Distant prospect is a thing greatly cultivated, I may say, in this city; and for its sake regulations exist as to the heights of houses, in order that nothing should interfere with the view.

But in alluding to Liverpool, I am forgetting that that city has been greatly improved of late in this respect, and that much has been done to repair the original mistake of treating the town and river as if they did not belong to each other,—as the filling up of the George's Basin, which, though some little sacrifice of dock convenience, was an immense improvement,—from the broad highway it opened to the river from the town, which no Dock Board had any right to disconnect. Liverpool, I am happy to hear, is also improving its architectural aspect towards the river. Many graceful buildings now immediately abut upon it, and sculptural decorations occur in different parts of the long line of sea-wall.

What raises your estimation of the architects here is that they do not claim any merit for their artistic treatment of the dock works in question. They have merely followed the ancients and Mediævalists, they say. The Romans had done the same before them. The ancient aqueducts, by which Rome was supplied with water, were so contrived that even in their passage over the gates of the city they were made to add to its beauty. In the Middle Ages even military architecture intended to receive the shocks of besieging armies, and to become objects of rude assault by battering-rams, are objects of beauty, and had grace of form and outline.

My Dear ——,—Among the minor causes of the high condition of the art of architecture in this country is that the architect has nothing at all to do with the execution of his designs, which is entirely in the hands of another professional, the building surveyor (so called to distinguish him from the land surveyor), and is devoted exclusively to his profession of fine-art architecture, just as a sculptor or painter is to his,—devoted to planning and designing edifices, though of course he thoroughly understands construction, and all its requirements, as well as the surveyor. He gives at the outset of the execution every needful drawing and instruction,—plans, elevations, sections, detail drawings, and specifications,—but is not required to superintend the erection, for the proper accomplishment of which the surveyor, in whose office merges that of the clerk of works, is alone responsible,—responsible for solidity, quality of material, and everything essential to the perfect and complete execution of the whole.

In harmony with this arrangement is the fact that the architect is not to be found by his

* See pp. 327, 344, and 373, *ante*, with letter from Mr. S. Huggins.

clients in the commercial or business quarters of the city, among merchants and brokers; but in the scholastic or collegiate, among painters and poets, historians and philosophers. There he has his studio, or rather his study (for they name everything in English), not his office, and is looked upon with the more consideration and respect in consequence.

The defence set up for this arrangement is, that the artist wastes his time, and dissipates his energies, in being occupied in what a man of lower faculties,—any man, in fact, of good plain understanding, whose mind had been given to such kind of work,—could perform as well as he, if not better than he, from being exclusively devoted to it. It is believed that the architect would otherwise waste time and energies that might be employed in further and higher pursuit of his own fine art, which is a jealous art, and no less than painting and sculpture, poetry and music, calls for the entire devotion of a life; an art which is rendered the more arduous and difficult from being encumbered with considerations about warming and ventilating, lighting and watering, draining and sewering, and all the thousand and one exigencies that the architect is bound to provide for, and which he cannot for a moment lose sight of. For my own part, I must say I heartily approve of all this, having always had a lively sense of the absurdity of our way of managing these matters. I always thought it ridiculous work for men, expected to be full charged with the "*divine afflatus*," to be examining mortar or testing foundations. Fancy the divine Raffaelle, whilst engaged on St. Peter's, leaving some beautiful Madonna, or sublime Transfiguration or Ascension, to examine an abutment, or certify the stability of a pier!

This relieving of the architect from the toils and drudgeries of execution has had the happiest effect upon him as an architect. With time and inclination for the study of those kindred branches, sculpture and painting, that rightly claim his attention, he has become a better, a completer, a broader architect, with more ability to guide the ministrations of those handmaids of architecture to their principal. Many architects give not only the subject of their bas-reliefs or other sculptural adornment, but the general design and composition, which, indeed, in a true work, is part and parcel of the architectural conception. Immunity from the harassing cares and anxieties of execution has left his mind more free to revel where, indeed, it ought constantly to dwell, in the realm of imagination, much to the advantage of his architectural productions. Set free from the prosaic part, the more earthly element that weighs down the profession amongst us, he sometimes finds his wings strong enough to bear him into even higher regions than architecture. It is no very uncommon thing for architects of fine sensibility to discover equal talent for poetry. Several I could name have courted the muses, and been crowned by them with their richest bays. These, it will perhaps, be said, are necessarily but few. But, take the profession as a whole, it is really superior in education and acquired talents, and, I may add, manners also, to what it is in England, though the English architect is evidently improving. Indeed, in no order are there to be found individuals better informed, more polite, humane, and ingenious than among the architects.

As the architect generally devotes his life to design, so the surveyor, whose social status is very different from that of the clerk of the works in England, devotes his to execution,—neither intrudes on the province of the other; and this arrangement is to the advantage of the execution of a building as well as of the design, for it is in the hands of a man of science, whose life is devoted to execution, and who is expected to be thoroughly acquainted with all constructive principles and operations, and to whom any cracking or sinking, owing to insufficiency of foundation, or bad materials or workmanship, would be a foul disgrace, causing the building to be taken down, to the utter ruin of his reputation.

Nor has the architect, I should add, anything to do with measuring work, or taking out quantities, as it is called, for the builders, or measuring land; but confines himself exclusively to design, as embodied in plans, elevations, sections, perspective views, models and specifications, and detail drawings, the completion of which completes his task.

Taking out quantities, I need not have mentioned, for the contract system has been entirely exploded in Australia, it being universally believed that no man can tell before-hand the cost of a work depending for its speed of execution on the ability and honesty of a host of workmen of every grade of intellect, capacity, and moral character; and that competition in such matters cannot go on consistently either with justice to the contractor or credit to the architect. It is said, moreover, that during the short period in which the contract system was tolerated here, no committee or proprietors disgraced themselves by accepting, out of a host of others, the *lowest* tender. It was generally (not always) the *middle* tender that was chosen. Sometimes the *highest*, if deemed a reasonable amount, was the adopted one. This principle, however, was soon abused, which led to the more speedy downfall of the system.

The mention of builders awhile ago reminds me that there are no such men here. Master *builders* are things unknown. There are master *bricklayers*, master *masons*, master *joiners*, &c., but no joiners and builders, or masons and builders, much less plumbers and builders. Each branch of building has its own professor, who does not trespass on the demesnes of any other, much less usurp the whole cycle of building trades, and call himself a *builder*. Builder, forsooth! no man would *dream* of calling himself a builder, or, if he did dream, would dare to do it. A builder is considered an impossibility; that is, it is held that no man is capable to perform, as the chief workman, all the ten or a dozen different branches of a building, as the words imply.

The result of this is that each man understands his own branch fully, and that the whole is better executed, and with less trouble to the surveyor, than it ever was under the old system.

MY DEAR ——,—Among consequences of the detachment of fine-art architecture from the mechanical art of building, with all its commercial or business elements, and keeping the profession a pure art and science, is that it has enabled the fair sex, whose minds are here very intellectually disposed and richly cultivated, to enter the profession. This will seem strange to many in England, and astonish not a few. But how could it be doubted that the female mind was fitted for fine-art architecture, as well as for painting and sculpture? Women have succeeded eminently in the latter arts, as well as in poetry and fiction, and other branches of literature: why should they not in architecture? Genius, it has been well said, is of no gender, and this the ladies here have well proved.

They especially shine in domestic, villa, and cottage architecture, into which they seem to enter *con amore*, and show an exquisite feeling and judgment that men cannot always reach; which might indeed have been predicted. Who was likely to tell so well about the arrangement of domestic offices, for instance, as she who precides over them? Whoever should fancy from this that there is any wish here to take woman out of her proper sphere, and make a man of her, would do great injustice to the taste and judgment of the Australians, who are as fully aware as we are that she differs from man in the intellectual faculties of the soul, as well as in the strength and character of bodily form. Everything is done to put her in her proper place, in her true relation to man, which is best accomplished by cultivating her best faculties, urging her to intellectual pursuits, and giving her every opportunity to raise herself to her real and destined dignity. In her girlhood she is taught that she has not only a rational mind and imagination, but a heart capable of sympathy with everything that is good and true in the universe, and that it is hers to develop and expand it; to cultivate her love for all that is beautiful, and increase her sense of the sublime and the infinite.

The result of such training is, that among the followers of art and science generally a far greater number of the fair sex is found in Australia than in all the countries of Europe put together, and the number will increase. The only militating principle I can see against it is the deficiency of the sex in the desire of fame or glory, their master-passion being, in every period of life, not ambition, that last infirmity of noble minds, but love. Cultivation, however, will probably remedy this. I need not add that single women who are independent householders have long ago been admitted to the suffrage, and allowed to vote at elections both for councillors and members of Parliament. Quite in keeping with this is the fact that women on their marriage do not change their name, or rather, do not throw away the name of their fathers, but simply add their husband's patronymic after their own Christian and surname.

Before quitting the subject of professions, I may as well remark that there is a branch of architecture here which scarcely exists in England, viz., naval architecture. Military architecture, for obvious reasons, is scarcely recognised; but naval is in great repute, and the professor of it is distinct from the practical shipbuilder, he, like the civil architect, having nothing to do with execution. This branch is, as I said, in great repute here, and great honour and emoluments are bestowed on its successful followers, it being considered that there is the widest scope for genius and talent in combining beauty, speed, and safety in the design and construction of a ship.

P.S.—I have but this moment recollected the particular inquiry of your last. As no clergyman here would venture to read a sermon he had not penned for his own, so no architect would dare to claim the merit of a design of which he was not the real actual author.

Partnership in painting is allowed, and the authorship of a work may be joint; but if partnerships among architects for good reasons are allowed, yet every work of any importance is expected to come out with the single author's name to it, or the two authors' names to it, if such be the case.

MY DEAR ——,—You wish to know something of the state of criticism in Australia: I will devote this letter to the subject. As soon as a public or important building, or a private one, is fairly finished the architectural journals set about to criticise it, which they do very freely, for it is considered that no man is more amenable to the bar of criticism than the architect. No matter whether it is a public or a private building,—as it meets the public gaze it must not outrage the sense of beauty, but be erected according to the laws of architectural grace. It need not be expensive nor very decorative, but what decoration it has must be good. It is established that nobody has a right to build his house ugly or ignore the laws and conditions of beauty, but must make it as beautiful as circumstances will permit, and both architect and his employer are liable to be rebuked for an ugly erection. But it is done dispassionately. If anything like personal animosity betrays itself,—if the object of the writer is evidently more to wound the feelings of the author than to weigh the artistic merits of his work, it would degrade the character both of journal and journalist in the eyes of the public, who go upon the principle that truth and candour are the brightest gems of criticism, and expect to have in each case the defects of the work pointed out to them, and its beauties held up to the admiration they deserve. Generally speaking, a pretty uniform opinion is expressed, which is the case also in literary reviews; for there is little of the disgraceful discordance of opinion here on the productions of the intellect which so much degrades criticism amongst us. This does not arise from honesty alone, but from greater ability and fitness for their task on the part of reviewers,—as to whose proper qualification there is a strong feeling here. In the case of the architectural reviewer, he is expected to be, if not a professor of architecture himself, at least possessed of all the high qualities of an eminent professor. It is not sufficient that he be a man of exquisite taste in architecture; he must prove that he is thoroughly acquainted with its principles, and has a mind at once artistic or poetical, and philosophical. He must have powers analytical and imaginative, without which latter he cannot even sympathise with works of imagination or invention. He should be able to form artistic conceptions and to realise those conceptions. He must be also thoroughly acquainted with the history of architecture, and know all that exists of its chief examples, of all times and nations, that he may pronounce true judgment on the claims of any work to originality, and be able to detect plagiarism. He cannot gain confidence and respect but by invariably showing that he sees and feels the shortcomings or blunders of what he condemns.

Such criticism as this advances the interest of art, and forms and purifies the taste of the public, instead of debasing it. I have been much pleased by the tone of criticism generally in this country, which has cheered me with the hope that detraction is not destined everywhere and for ever to pour the "waters of bitterness" upon the artist who dares to consult his genius and his conscience alone, or on unacknowledged or obscure merit.

The literary reviews are characterised by much force. They notice the chief publications with great animation of sentiment and elegance of diction, and many of them exhibit both the delicacy of taste and ardour of genius. They give, in short extracts, the truest idea of a work without adding aught irrelevant or impertinent.

MY DEAR, ——.—The clergy here are a very pious as well as a learned body, totally absorbed in the duties of their sacred profession, and never dictate as do the clergy in England in matters architectural. They make it, I am told, a point of honour not to interfere in the affairs of another profession. "I should not like," said an eminent member of that body to me a few days since, "to have architects dictating to me the literary style of my sermons; and as I must observe the Christian rule which requires me to do to others as I would they should do unto me, I abstain from dictating to architects the style of their works. In a church for my own use, I should feel anxious," he continued, "to have the plan a convenient one for the seeing and hearing of the congregation, and that it should wear an appropriate solemnity of air and character; but I presume the architect is aware of the importance of these, and knows how to obtain them better than I do. Our Divine Master," added he, "never troubled himself about the plans or style of the synagogues in which he taught; and there is nothing in which we should do amiss by imitating his example. It would be better for national piety, I am quite sure, if your English clergy would confine themselves to their preaching, and leave architecture to its professors; and I have little doubt it would be better for national art too."

Some twenty years ago, I am told, a high dignitary of the church made an attempt to impose his commands regarding style upon his architect. But there was so firm a resistance made by the architect immediately concerned, and so stern a rebuke administered by the president of the Architectural Section of the Royal Society of Art, who is the Minister of Architecture, that it has not been repeated.

"The learned education and great influence of the clerical profession," said the President of the Society, on the occasion referred to, "must enable them greatly to aid the study and appreciation of architecture, by creating or disseminating an interest and taste for it among the upper classes, and, indeed, all classes of society. But we have to guard against anything like interference on their part in reference to the style or plans of ecclesiastical edifices, which common sense might have informed them are safest left to the educated taste and judgment of those who have devoted themselves to architecture,—on which we should bear in mind that clergymen as a body are just as liable to fall into grievous errors as any other persons; and that to render their labours in the field of architectural criticism really valuable to the cause of art, it is important that their works be taken at their real value, which must be just in proportion to the education, general intelligence, and judgment of their authors.

I am the more anxious," he continued, "on this point, because I happen to know that much mischief to the cause of art has been done, and is still doing, in our mother country and other countries of Europe by such interference, as well as by the dictation of non-professional writers on architecture generally, some of whom it is to be feared, never held a pencil, and have no other qualification for the task than the power of literary composition, except what knowledge they may have attained to by what is called cramming. Such can only confuse, perplex, and mislead their readers. How can men know anything about the capabilities or susceptibilities of styles who, having never drawn an architectural line, are incapable of testing them?"

There are many architectural amateurs, however, among the clergy, who seem to have a fondness for the pursuit of our art, and some who have made important researches into its history and principles, which they have modestly submitted to the consideration of the profession, by whom, of course, their labours have been gratefully received.

The subject with which I shall conclude this letter would to many seem trifling. To me it appears by no means unimportant. It is at least necessary to give you a finished idea of the aspect of this city.

There is an enclosed place in each district of the city for the reception of rubbish from buildings taken down, or from excavations, or what not; and there being therefore no excuse for laying rubbish in exposed situations, and so disfiguring the place, very heavy penalties are inflicted on such violations of public decency.

Another law very worthy of imitation here, is that all unbuilt land within the city or its suburbs must be enclosed by a respectable wall or balustrade, which operates to the city wearing always a finished holiday look, the more so, as such enclosing wall is not allowed to be disfigured by advertising bills or placards, such things nowhere offending the public eye. Moreover, during the erection of a new edifice no building materials are allowed to be exposed. All must be brought straight within a sightly enclosure, high enough to hide all building operations from the public gaze. Moreover, no house is allowed to fall into decay, and by broken windows, omission of painting, or other repairs, present a dilapidated or miserable appearance to the public eye. Every owner is obliged to keep his house in some decent order externally. If he does not, after being duly warned, it is restored, at his own cost, by the authorities.

My wife, who is a great stickler for cleanliness and tidiness, is loud in her approbation of this, which has brought her into some rather sharp disputes with her friends and others; in which it is contended against her that it is inimical to the liberty of the subject; a position to which my good lady replies, and I think justly, that such laws are no more inimical to the liberty of the subject than those that are enacted against theft, as both are for the protection of the public; those in question being to restrain from hurting its sense of beauty, propriety, and order, which no man has a right to do.

For my own part, however oppressive the regulations may seem to individuals, something of the kind always seemed to me desirable,—for want of them what a wretched aspect many parts of our great towns exhibit. Liverpool, where building operations are for ever and in all directions going on, must at all times present a slovenly littered appearance. It is always, we may say, in *déshabillé*; or rather it can never look finished, however great its extent.

My wife says she would have a law to compel the cleaning of the woodwork in front of houses every three months, and their repainting every year, and would have people fined for allowing a single broken pane in their windows. But this is a woman's notion, which I fear there would be a difficulty in carrying out.

Of annoyance from bad designs in this city of advanced art there is little danger. It is saved from that most melancholy of all spectacles,—bad building, I mean bad construction and materials, inducing premature ruin and decay, by a very stringent Building Act. The lowest class of houses are as well and as substantially built of their kind as those of the highest. The walls, too, of small houses are not made of a thickness merely proportioned to their height and extent, but they are made of a thickness sufficient to equalise the temperature. No human dwelling, for example, must have its external walls less than a brick and a half thick to the top, with proper increase in the foundation, and no division-wall between the smallest houses less than the same thickness; if of stone, 2 ft. thick. Should this thickness of party-walls to the smallest houses seem to you excessive, bear in mind that privacy, and security from spread of fire from house to house is at least aided by it.

SCAMOZZI SMITH.

DR. SCHLIEMANN'S INVESTIGATIONS IN THE TROAD.

WE were the first to announce in England the news which took the archæological world by surprise, of the remarkable remains brought to light, through the energy and perseverance of Dr. Schliemann, on what their discoverer now unhesitatingly pronounces to be the scene of the oldest and greatest epic poem of the world. This may, perhaps, serve as an apology, if any is needed, for a comparative delay, owing to press of other matters of immediate interest, in doing justice to the record of Dr. Schliemann's work in the English translation of Miss Dora Schmitz, under the editorship of Mr. Philip Smith,* and illustrated by about 500 engravings of various classes of objects discovered on the site. The book derives an additional interest from the manner in which it is put together; not being a record in the past tense, made when the work was completed, but a series of chapters written at intervals while the excavations were in progress, and more or less in a "present tense" form; so that we get the record of the condition of the work, and the manner in which the several stages of the discovery unfolded themselves, as it proceeded. The author in the original preserved this journal form so far as to leave uncontradicted in some earlier portions the views which, after further investigation, he abandoned or modified; and the editor of the English edition has done well to retain this dramatic form (as it may be termed) of the history, merely adding now and then an explanatory note to draw the reader's attention to the subsequent repudiation of this or that theory.

Dr. Schliemann seems to have had a very early prepossession in regard to Homer, commencing in an odd way enough, as appears from his short autobiographical notice; an account which is, in itself, of no little interest, as a tale of apparently almost insuperable obstacles to position or even education, overcome by indomitable application and resolution. There is something in his account of his early misery and privation which recalls the early history of Dickens, though it is told with far more simplicity than the latter ever evinced. Dr. Schliemann's father, it appears, had early interested him in the Homeric heroes; but his reminiscences had nearly disappeared before the daily drudgery of a shopboy's life, though the love of learning did not die out of him, and was thus revived:—

"I shall never forget the evening when a drunken miller came into the shop. He was the son of a Protestant clergyman in a village near Teterow, and had almost concluded his studies at the Gymnasium, when he was expelled on account of his bad conduct. To punish him for this, his father made him learn the trade of a miller. Dissatisfied with his lot, the young man gave himself up to drink, which, however, had not made him forget his Homer, for he recited to us about one hundred lines of the poet, observing the rythmic cadence. Although I did not understand a word, the melodious speech made a deep impression upon me, and I wept bitter tears for my unhappy fate. Thrice I got him to repeat to me those godlike verses, paying him with three glasses of brandy, which I bought with the few pence that made up my fortune. From that moment I never ceased to pray God that, by His grace, I might yet have the happiness to learn Greek."

The *naïveté* of the concluding sentence is curiously characteristic of the old German pietistic mind; but the future investigator of Troy, as may be supposed, did not neglect to supplement his petitions by practical efforts of his own. For the remaining details of his chequered life, and the dogged resolution with which he set to work at acquiring languages in every interval of necessary occupation, we must refer the reader to the autobiographical sketch. But the transition from the unhappy slaving shop-boy, attracted by the sound of the Greek, to the successful discoverer of what has at least the best claim to pass for the site of Troy, is a specimen of the vicissitudes of life too curious to omit.

The main facts in regard to the recent operations on the hill of Hissarlik are pretty well known to our readers, or at least their general results. We should rather aim here at calling attention to some of the more significant points in connexion with the method employed, and the nature of the articles discovered, referring our readers to the book itself for further details. What particularly distinguishes Dr. Schliemann from former investigators of the subject is the systematic manner in which he has brought all his theories and researches to the practical test of digging for ocular evidence in the shape of relics and remains. The question as to the reality of Troy, and as to its situation, if real, has been, as we need not remark, an object of interest for many centuries. There have been writers who have merely theorised upon it from comparison of the Homeric account with maps and modern names, without so much as visiting the site. Others have visited it, and founded their speculations upon considerations of the run of the country, the natural features of the landscape, with more or less plausibility and ingenuity. Dr. Schliemann, we believe, is the first who has reduced the hunt for the supposed site of Troy to the prosaic, practical, and (we may add) expensive test of downright digging for it. This practical test, by Dr. Schliemann's account (and it seems to be admitted on all hands that his narrative is quite beyond impeachment as to facts) at once disposed of the heights of Burnabashi, which had of late been the favourite site with Trojan critics; since

* Troy, and its Remains: a Narrative of Researches made on the Site of Ilium and on the Trojan Plain. By Dr. Henry Schliemann. Translated with the Author's sanction. Edited by Philip Smith, B.A. With maps, plans, views, and cuts illustrating 500 objects of antiquity discovered on the site. London: John Murray.

excavations here led to the undisturbed soil or rock within a very little distance of the surface. The excavations on the hill of Hissarlik led to results at least sufficiently different from this. A section of the formations pierced through gives, at a glance, a rough idea of the extent of the layers of *débris* which form the upper portion of this hill, and the accumulation of which has considerably increased its original height, from 40 ft. to 46 ft. having been pierced before the original surface was reached. Within this thickness Dr. Schliemann recognised five distinct strata, discriminated from one another by the character of the remains found in them. The upper stratum, about 6 ft. thick, contains inscriptions as late as the second century, and coins as late as Constantine and his immediate successors; and Dr. Schliemann identifies this stratum with the Greek colony whose existence is inferred in a passage which he quotes from Herodotus, as dating from at least 500 B.C., though he gives it (with scarcely sufficient reason from the evidence adduced) a probable date from two hundred years earlier. "The house walls of Hellenic architecture, consisting of large stones without cement, as well as the remains of Greek household utensils, do not, however, extend in any case to a depth of more than two mètres (6½ ft.) in the excavations on the flat surface of the hill." "Below this the immense layer of *débris*, which has been left by the four different nations that successively inhabited the hill *before* the arrival of the Greek colony, that is before 700 B.C., is an immensely rich *cornucopia* of the most remarkable terra-cottas, such as have never been seen before, and of other objects which have not the most distant resemblance to the productions of Hellenic art." The possible question whether this enormous mass might be composed of material brought from other places and piled here to increase the height of the hill for some special purpose, is answered by the fact that all the remains of masonry occurring in the various strata rest upon strong foundations, and are the ruins of real houses; and all the large urns discovered were in an upright position. Although evidently convinced at an early stage of his work that he had found his mark, Dr. Schliemann's opinion as to which of the strata was to be assumed as the Trojan one varied at different epochs of the work, and at one period he writes as if he had finally determined on the lower and thickest stratum as the one; but the verdict in the end was given decisively in favour of the one next above this (about 10 ft. in thickness), and could not be otherwise, from the extent and nature of the remains discovered in it. Not that we are saying here that there is any absolute conviction that here were the ruins of Homer's Troy (a point on which we have a word to say just now), but that here was by far the richest and most important collection of relics; here were manifest traces of destruction by fire; and here were remains of walls and masonry which Dr. Schliemann considered could be identified with parts of the city referred to in the "Iliad." Leaving this latter consideration on one side for a moment, we may notice one conclusion to be drawn from the account of the "yields" of the different strata, as to the fallacy of drawing inferences in regard to the relative age of different remains from the proportion of stone implements found in them. Whatever opinion might be formed as to the positive date of the different strata, their relative date is left beyond doubt by their position one upon another. But in the stratum immediately below the Greek remains, Dr. Schliemann found such a number of stone implements and stone idols, of a rude enough type, that he jumped at the conclusion that he was in the "stone age," and in fact anterior to any probable date of Troy. But as he went further down, contrary to all established rules and regulations, the workmanship of the articles found became better, and the stone gradually disappeared, and was replaced by iron, copper, and bronze of superior workmanship. This is not the first time that investigations of this kind have brought out results diametrically opposed to the idea of the uniform progress of civilisation, and have led instead to the conclusion that long periods of progressive deterioration had been going on. Perhaps the kind of light thus thrown upon theories of national development is not the least important of the results of Dr. Schliemann's labours.

Among the great number and variety of the terra-cotta remains found in the various strata, and especially the one particularly selected as representing the remains of Troy, the most remarkable feature by far is the constant recurrence of a face of a more or less owlish character upon the upper part of the vase, accompanied by suggestions of the female figure in a rude shape on the body of the vase; almost always *mamma* in a sufficiently recognisable form, frequently accompanied by a symbolical representation of the navel, sometimes with the representation of long hair behind, and almost invariably with a rude imitation of upraised arms or wings, at first sight looking like handles. The example shown in the plate (fig. 1) wants these arms, but is remarkable as one of the largest and finest specimens of this class of object, and also for the ornamental girdle which crosses it between the breasts, and which is a still further evidence of its intention as a rough representation of a figure. In fig. 2, which represents the largest of the vases found in "The Royal Palace of Troy" (20 in. high), the arms, or, as Dr. Schliemann here calls them, "wings" (in reference to the owl head), are seen, and in fig. 9 the wing form is more marked. The owl's head occurs in numberless examples, sometimes on the body of the vase, sometimes separate, and forming the lid; specimens of these separate lids are given in figs. 3, 4, 5, and not improbably the lid of No. 9, which is wanting, may have taken this form. That there was some important symbolical meaning attached to this constantly-recurring figure there can hardly be a doubt; and Dr. Schliemann connects it with the worship of Pallas, to whom, as every one knows, the owl was sacred in the days of classic Greece, and who is continually named in the "Iliad" as γλαυκῶπις Ἀθήνη, or, as he translates it, "The goddess Athena with the owl's face," which he contends is the real meaning of the adjective, and not "bright-eyed," or "blue-eyed," as usually translated.* This is both ingenious and startling, but no reader of Homer, we think, will be willing to imagine "the blue-eyed maid" as an owl-headed deity of the Assyrian type, though she may have degenerated into this in a more prosaic age, which is the view taken by Professor Max Müller, who is distinctly adverse to the Schliemann theory. At the very first appearance of Pallas in the "Iliad," she is mentioned as "the bright-eyed" (according to the usual translation), in the same sentence in which Heré (Juno) is described as "the white-armed," so that one may naturally suppose each epithet to refer to ordinary bodily characteristics. However, these owl-headed vases are no doubt a remarkable incident in archæology, and will probably afford some new ground for students of ancient creeds to build upon. Of the other vases of which we give illustrations, fig. 6 represents a long-spouted form frequently recurring, and which, if not very beautiful, seems practically proof against the danger of spilling in pouring out; and fig. 7 represents a two-handled form of cup, which will not stand except on its rim, and which Dr. Schliemann identifies with the Homeric δέπας ἀμφικύπελλα, commonly translated "double cups," but which seems much more rationally translated into "two-handled cups," such as this; of which the *amphora* of the Romans (also a word of Greek derivation) is perhaps a descendant. No. 8 which was found not in the Trojan stratum, but in that above it, we select as a remarkably curious specimen of what may be called a bugle-shaped cup. We may mention, as bearing upon the relative purity of taste in ancient and modern times, that Dr. Schliemann found a good many specimens (of which two or three are figured) of cups and other vessels in the shape of animals, on exactly the same principle as that milk-jug in the form of a cow, with the lid in the back and the mouth forming the spout, which Mr. Ruskin has somewhere stigmatised (not unjustly) as an instance of the utterly degraded taste of the lower orders in England. Whether it be a grief or a consolation, it would seem that bad taste is at least no sin of merely modern date.

Another point for the archæologist to note among the salvage of Dr. Schliemann is the recurrence of that sign called the *fylfot* which we had occasion to allude to recently in noticing the late Mr. Waring's book on Antique Pottery. Upon some of the Hissarlik pottery the emblem of the sun is surrounded by four crosses of this shape, which again form a cross in their arrangement around it (p. 119). Among the most numerous class of objects discovered was a number of small terra-cotta whorls, mostly in the form of flattened spheroids, and engraved with signs and characters of which nothing has yet been made. A great many of these are engraved as an appendix to the present volume; but a remarkable one, perfectly circular, is given on p. 188, which is scored round in parallel lines dividing it into zones, as if it were a planetary symbol or model; two of the zones studded with dots, and the middle one, broader than the rest, ornamented by a repetition of the *fylfot* symbol. It seems certain that this object must be something more than a mere ornament.

Of the discovery of the most remarkable "find" made on the spot, and which Dr. Schliemann calls the "Treasury of Priam," we may quote the account in his own words, though we have before now referred to it:—

"I uncovered the Trojan city wall which runs out from the Scæan Gate. In excavating this wall further, and directly by the side of the palace of King Priam, I came upon a large copper article of the most remarkable form, which attracted my attention all the more as I thought I saw gold behind it. On the top of this copper article lay a stratum of red and calcined ruins, from 4½ ft. to 5½ ft. thick, as hard as stone, and above this lay the above-mentioned wall of fortification (6 ft. broad and 20 ft. high), which was built of large stones and earth, and must have belonged to an early date after the destruction of Troy. In order to withdraw the treasure from the greed of my workmen, and to save it for archæology, I had to be most expeditious, and although it was not yet time for breakfast, I immediately had '*paidos*' called. (This is a word of uncertain derivation, which has passed over into Turkish, and is here employed in place of ἀνάπαυσις, or time of rest). While the men were eating and resting I cut out the treasure with a large knife, which it was impossible to do without the very greatest exertion, and the most fearful risk of my life, for the great fortification-wall, beneath which I had to dig, threatened every moment to fall down upon me. But the sight of so many objects, every one of which is of inestimable value to archæology, made me foolhardy, and I never thought of any danger. It would, however, have been impossible for me to have removed the treasure without the help of my dear wife, who stood by me ready to pack the things which I cut out in her shawl, and carry them away."

Out of this wonderful hole in the wall came forth a large copper shield, answering to the Homeric description of the various parts of a shield; copper plates and vases; then cups and vessels of pure gold, flat pieces of silver in the form of knife-blades, &c.; in short, the idea conveyed by the enumeration of the articles (except the shield) is, that Dr. Schliemann had got straight into the butler's pantry of the period. With these vessels were packed also (inside some of them) gold ornaments, diadems, and fillets; a large number of these are engraved with the English edition. Dr. Schliemann's opinion is, that these were articles packed together for removal in an attempt to escape from fire, and perhaps from an enemy at the same time.

"My dear wife," who is mentioned in the foregoing extract, seems to have been a helpmeet worthy of the occasion. She is, we are incidentally told, an Athenian lady, possessed by a great interest in Homer, and, which is still better, by a thorough belief in the interest and value of her husband's investigations. In several places Dr. Schliemann says that he achieved things with her assistance which he could not otherwise have accomplished. She accompanied him through the whole of his arduous labours, living on the scene of the excavations with him under no little discomfort and privation. The workmen were by no means easy to deal with. On one occasion, it will be refreshing to English architects to hear, seventy of them struck for increased pay, under the impression that as the weather was fine their employer would not lose a day, and could not get on without them. Dr. Schleimann, to their great discomfiture, employed one day in going or sending round to the nearest villages and procured hands in their place by the next morning, and these obstructives found themselves completely humbled and outwitted. His difficulties with the Turkish Government were considerable, and not creditable to the Government. Dr. Schliemann defends himself against the charge which had been made against him of having broken faith with them. After a good deal of bartering and huckstering, for the privilege of excavating, with Safvet Pacha (whose only interest in the matter was an expectation that gold would be found there), and after the Pacha had already directly broken his word once, it was at last arranged that Dr. Schliemann should have permission to excavate as much as he wished, on condition of giving over one-half what he found to the Pacha, a stipulation assented to on condition that Dr. Schliemann should have liberty to carry the other half out of Turkey. "But

* γλαυξ is *an owl*, and γλαυκος *bright or gleaming*; the usual theory being that the owl was so named because of its glaring eyes. Dr. Schliemann's hypothesis, of course, requires the contrary theory,—that the adjective was derived from the name of the bird.

VESSELS FOUND BY DR. SCHLIEMANN ON THE SUPPOSED SITE OF "TROY."

FIG. 1.

FIG. 3.

FIG. 4.

FIG. 5.

FIG. 2.

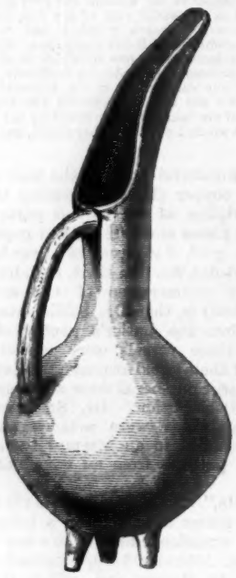


FIG. 6.

FIG. 7.

FIG. 9.

the right thus conceded to me was revoked in 1872 by a ministerial decree, in which it was said that I was not to export any part of my share of the discovered antiquities; but that I had the right to sell them in Turkey. The Turkish Government, by this new decree, broke our written contract in the fullest sense of the word, and I was released from every obligation. . . . . I kept everything valuable that I found for myself, and thus saved it for science, and I feel sure that the whole civilised world will approve of my having done so." We have no doubt of the verdict of the civilised world.

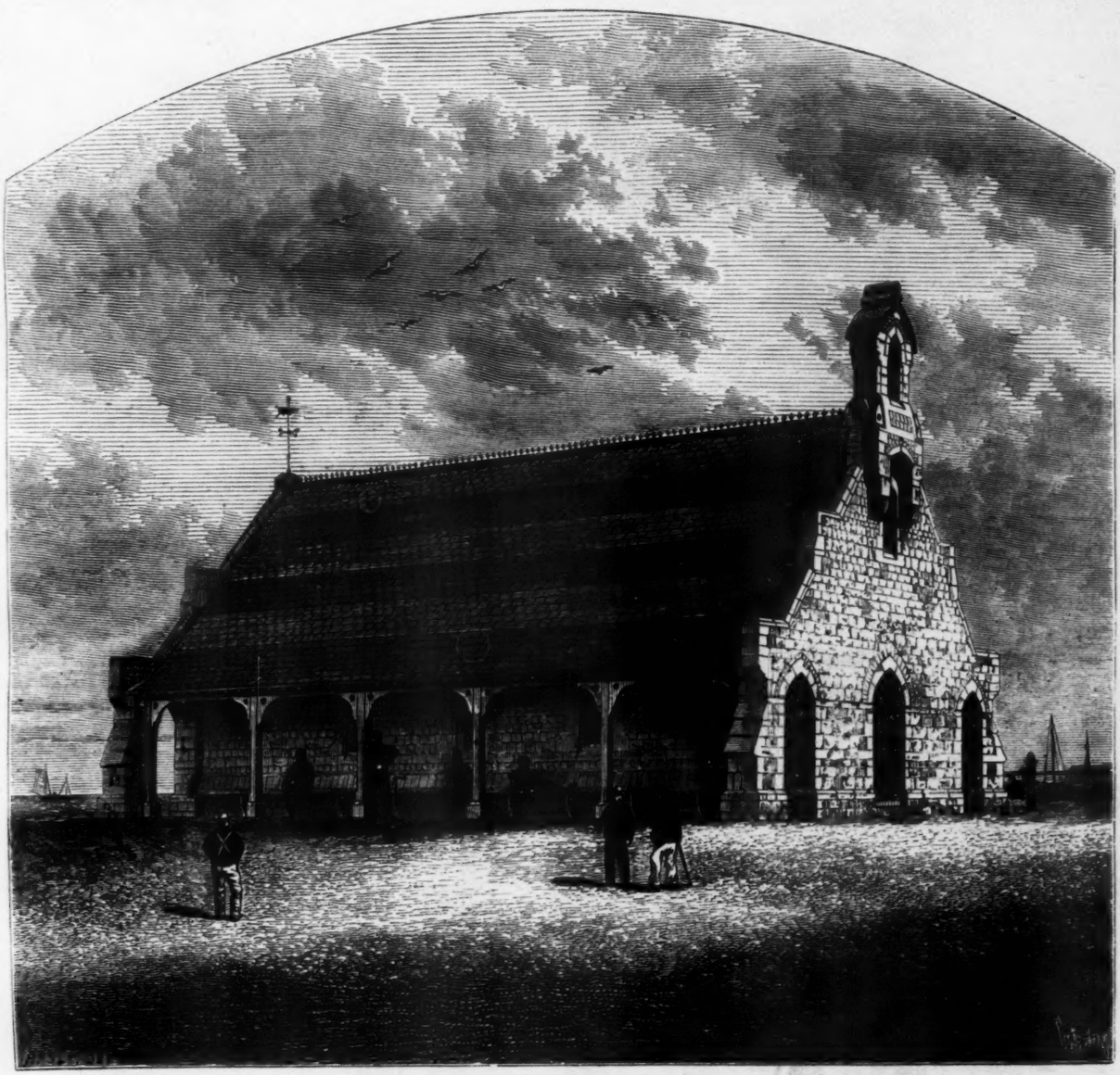
We have given but a very slight and imperfect idea of the information afforded in this interesting volume, which is written with a simplicity and directness of manner only broken through now and then by a little exaggerated, but sincere, enthusiasm over some of the objects discovered. What is the relation of this discovery to the Troy of Homer is another question. Dr. Schliemann has laid himself open to a good deal of criticism by the directness with which he has assumed the personages and places of the "Iliad" as facts; the most pointed instance being his fixing the name of "Priam's Treasury" on this remarkable collection of utensils; which is about as practical and probable as if a man were to find a collection of antique weapons of the chase somewhere in

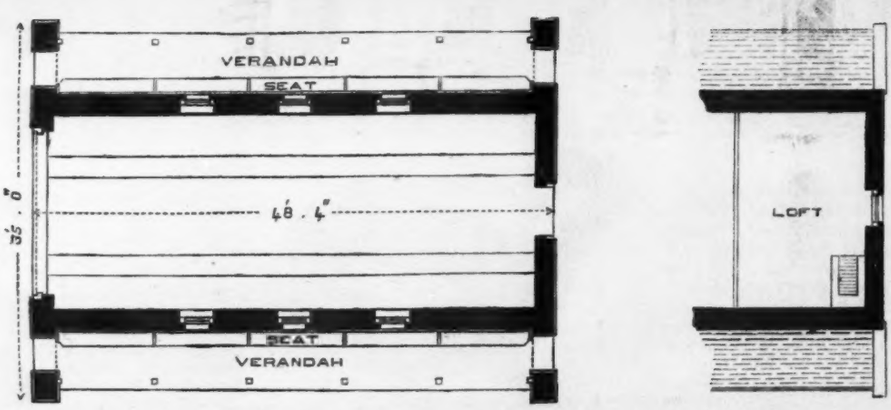
FIG. 8.

Assyria, and call it "Nimrod's Gun-room." Some of the coincidences, though not counting for much when taken apart, are certainly remarkable when added to the others; for instance, Dr. Schliemann seems to have been much struck with the violent and continued strong winds which he encountered during his work at Hissarlik, and not unnaturally compares this fact with Homer's favourite epithet for the city, familiarised to English readers by the line in one of the finest of Tennyson's earlier poems:—

"Far on the ringing plains of *windy* Troy."

But when we look at the plans of the walls as excavated, and see the cramped proportions of the little place, and compare it with the immortal "wide-built city" of Homer, all idea of the discovery as an addition to the interest of the poem seems to vanish. To have the Homeric Troy cut down to this would be a serious blow indeed. All that can be said in regard to this part of the question is that if the "Iliad" had a foundation in some real event, this is a more probable scene of that event than any other yet suggested. But the Homeric poem, whether with any substratum of fact or not, is so purely imaginative and romantic, that an attempt to fit it to topographical facts must be a failure, as well as a great injury to the effect of the poem. This is the only point of view from which any doubt can be thrown on the value of Dr. Schliemann's discovery. In any other light, it must rank among the most remarkable events in the history of archæology; and the presence of this accumulated heap of ancient remains which yields itself up to the first determined search, though lying neglected for ages, suggests the advisability of further and more systematic investigation of this kind in other quarters. Who can tell what new and unsuspected records of early human history may be lying about the globe, ready to yield up their secrets to those who will have the energy and industry to dig them out?





THE LIFE-BOAT STATION, WALMER.—MR. CHARLES H. COOKE, ARCHITECT.

THE WALMER LIFE-BOAT STATION.

THE NATIONAL LIFE-BOAT INSTITUTION.

THE annual meeting of the National Life-boat Institution was held last week, and H.R.H. the Duke of Edinburgh made an excellent address, describing the important work which has been done through its instrumentality. The report, which was read by Mr. R. Lewis (the secretary), showed that, since the last meeting, the Institution had placed twelve new life-boats on the coast,—five of them at new stations, and the others replacing old or inferior boats. Seven of them had been provided with transporting carriages, and six new boat-houses had been built. During the past year the society's life-boats, which are now 250 in number, had saved 543 persons, nearly all of them under perilous circumstances, when ordinary boats could not have effected their rescue, or could only have done so at extreme risk to those on board them. These invaluable services since the last annual meeting had happily been rendered without any loss of life among the brave men who had performed them. It was satisfactory to know that, as far as the operations of this institution were concerned, the violence of no storm appalled the brave men who manned the life-boats. The number of lives saved from its first establishment to the present time, either by its lifeboats or by special exer-

THE PROVIDENT INSTITUTION SAVINGS BANK.——AT THE CORNER OF ST. MARTIN'S LANE AND HEMMING'S ROW. MR. DAVID BRANDON, F.S.A., ARCHITECT.

tions, for which it had granted rewards, was 22,866. Language failed to express adequately the gratitude which every one must feel who ponders over this noble list of lives saved, and the instinctive thankfulness that rises up in the heart that such great work has been accomplished on our shores. The total amount of the receipts during the past year had been 33,500*l.* 14*s.* 2*d.*, and of that sum 7,213*l.* were the result of special gifts to defray the cost of ten life-boats. The expenditure, including liabilities, had amounted to 32,363*l.* 17*s.* 7*d.* Entering on the fifty-second year of its existence, the National Life-boat Institution, in the maturity of its strength and experience, had every encouragement to pursue its career of active work with unabated vigour and undiminished confidence.

In furnishing a life-boat's equipment, the first duty is to provide her with everything than can contribute to the safety of those employed on this dangerous service; and secondly, to make her as far as possible independent of all assistance from wrecked vessels, the crews of which are often in a helpless state, perhaps lashed to the rigging, and unable to throw a rope, or even to get from the wreck to the boat without help.

A life-boat is therefore provided with life-lines, some festooned round her sides, by the aid of which any one in the water using them as stirrups can get into her; others with corks attached are thrown from within her when alongside a wreck, and float on the water all around her. She is also furnished with a cork life-buoy, which, with a line attached, can be thrown, or floated, to any one in the water, who might be too distant to reach the life-lines of the boat. She has likewise strong but light lines with grappling-irons attached, one at the bow and another at the stern, which, by being thrown into the rigging or on board a wreck, fasten themselves, so that the boat can be at once held to the wreck without the assistance of any one in her. An anchor and cable; a good lantern for nightwork; a compass; and a drogue or water-bag, which is dragged behind a boat to prevent "broaching-to" when running before a heavy sea, are also necessary to a complete life-boat's equipment.

In addition to the life-boat, transporting carriage, and equipment, a suitable *house* is indispensable to shelter them from the weather when out of use. In 1857, the Institution secured the services of Mr. C. H. Cooke as its honorary architect, and his co-operation in connexion with the erection of its life-boat houses has been very valuable. From his plans and specifications upwards of 200 substantial and well-built houses have been constructed at different life-boat stations.

In choosing sites of ground on which the life-boat houses are to be built, regard is particularly taken to their convenience, so that they may be handy for launching the life-boat, and for her easy transport on her carriage along the coast to the scene of the wreck. The house is usually 40 ft. long and 17 ft. wide; its doors are 14 ft. wide, and their height about 12 ft. There are folding-doors of the above dimensions facing the water; and if it should be deemed an advantage to be able to take the boat on her carriage to the rear of the house, doors of the same dimensions are also placed at that end, otherwise a small door at the rear end suffices. The life-boat house is usually a substantial building, built of brick or stone, and having a slated roof. A boarding or flooring, about 6 ft. in length, is placed over the joists at the rear end of the house, to keep the spare stores on; and a batten with wooden pegs for hanging up the life-belts and small lines, is fixed at a convenient height along the side wall. In some of the life-boat houses gas has been fitted.

The average expense of a complete life-boat station is 800*l.*, in addition to 70*l.* a year needed to keep the establishment in a state of efficiency. The cost is made up as follows:—

Life-boat and her equipment, including life-belts for the crew, and transporting carriage for the life-boat	£550
Boat-house (average cost)	250
Total	£800

We take the opportunity to illustrate the life-boat station which has been recently completed at

Walmer.

This house is built with Kentish rag and Bath stone dressings, the verandahs and uprights, and all exposed woodwork, being stained and varnished. There are large doors about 14 ft. wide at the end opposite to that shown in the view. There is a loft at one end of the house for tackle, and the walls are fitted with pegs for life-belts. Ventilation is secured by louvred openings in gables and sides of house by fixed louvres in casements, alternate with glazed windows.

The life-boat was christened, and the station opened, by the Lady Victoria Leveson Gower, the youthful daughter of the Right Hon. Earl Granville, who, with many distinguished guests then visiting at the castle, attended on the occasion.

The verandah, or covered ways, on each side are fitted up with seats, and afford comfort and shelter to the sailors. The work was satisfactorily carried out from Mr. Cooke's designs by Messrs. Denne, of Deal, at a total cost of 516*l.*

It is impossible to speak too strongly of the importance of the work which the Life-boat Institution is formed to do, and of the value of the results which have attended its labours.

THE PROVIDENT INSTITUTION SAVINGS BANK.

THE Provident Institution Savings Bank, St. Martin's-place, was first established in Leicester-place, in the year 1816, with the Duke of Somerset for its president. It has been carried on from that date up to the present time, during which period, as shown by last annual report, 23rd June, 1874, 329,595 accounts have been opened by depositors and by trustees of friendly and charitable societies, who have paid in (including interest credited) the sum of 19,065,177*l.* 3*s.* 2*d.*, of which 17,478,649*l.* 19*s.* 10*d.* have been repaid to them, leaving a balance of 1,586,527*l.* 3*s.* 4*d.* then due to 40,285 depositors.

On the resignation of the Duke of Somerset, in May, 1838, the Lord Dynevor was elected president, and upon his lordship's resignation, on the 1st of March, 1849, his Royal Highness the Prince Consort, having intimated his willingness, was duly elected president, and took a lively interest in the institution, and wished for a thorough examination into the state and system of the accounts, by an accountant, which was made. On the receipt of the report, the following letter was received by Mr. Wray, one of the managers of the Provident Institution:—

"Buckingham Palace, 6th April, 1850.

"I have received the commands of his Royal Highness the Prince Albert, to forward to you the report of the examination of the accounts and system of the Provident Institution, St. Martin's-place. I likewise send you the voluminous documents which accompany this report, which fully prove the care and attention which have been employed by the accountant who has conducted the inquiry. It is exceedingly gratifying to his Royal Highness to find the full confidence which he had reposed in the excellence of this Institution fully justified by the result of this searching examination.

C. B. PHIPPS."

After the lamented death of his Royal Highness the Prince Consort, the Marquis of Westminster filled the office of president, which is now held by the Right Honourable the Earl of Harrowby, who was elected in July, 1870.

This Institution increased so rapidly that its original site was not sufficiently large, so that a building was erected, No. 5, St. Martin's-place, in the year 1830, where its business was carried on for forty-three years. That site, however, being required under the National Gallery Enlargement Act, the present handsome building has been erected by Messrs. Myers, according to the plans, and under the supervision of Mr. David Brandon, architect.

The entire building includes a number of vaults in the basement story, to receive papers relating to the transactions of the bank since its establishment in 1816, also lavatories, and a luncheon-room for the clerks. On the ground-floor is the banking-room, which measures 47 ft. by 32 ft., the public entrance, secretary's room, strong-room, and a private entrance leading to a residence on the upper floors, and in the basement story for the secretary. On the first floor are the Board-room and auditor's room, lavatories, &c. There is also a separate entrance in Hemming's-row, leading to a set of offices at present unappropriated.

The principal fronts in St. Martin's-lane and Hemming's-row are of Portland stone, and measure respectively 44 ft. by 60 ft. in length, by 45 ft. in height to the top of the balustrade.

The total cost of the works, including the builder's contract, and the various interests in the properties, was about 21,000*l.*, subject to a ground-rent of 258*l.* per annum: this outlay having been increased in consequence of the requirement of the Metropolitan Board of Works to widen the entrance to St. Martin's-lane by 8 ft., involving the purchase of additional property in Hemming's-row.

MODELS BY FOLEY AT THE BURLINGTON ARTS CLUB.

IN one of the rooms of this club are now collected the original models and casts (small size), made as studies for a good many of our late gifted sculptor's works, chiefly consisting of his portrait statues. The opportunity thus afforded of comparing these, in immediate juxtaposition, brings out strikingly the power of the artist in individualising these works, and giving to each subject the attitude and manner which seem most appropriate to his physiognomy and character. In the statue of "Lord Clyde" the sturdy attitude, almost destitute of outward grace, assimilates remarkably with the stern, rugged features of this born soldier. The figure of "Lord Herbert," designed for the War Office, is remarkably grand in its thoughtful and wrapt expression and action; and that of "Stonewall Jackson" may be classed with it as a figure in which heavy drapery is made use of to intensify the expression of grandeur which is aimed at: these two figures might well stand as excellent expressions of the theoretic and the active forces of war; the one deeply contemplative, the other prepared to fight his way through all obstacles. Of statues of figures in civil and professional life, those of Lord Dunkellin, Mr. Fielden, and the sitting figure of Sir Chas. Barry, are admirable examples of quiet but expressive pose. It is rather curious to compare the model of the equestrian portrait of "Lord Canning," dating from some time back, with that recent magnificent work "Sir James Outram": between the quiet and inobtrusive treatment of the former, and the extraordinary energy of the latter, there is evidence of half a lifetime of endeavour and progress in the art. It is not every artist who, after a tolerably long career, could point to his last work as his best, which the Outram statue may be said to be; as a portrait-statue, at least, of the equestrian type, we should doubt whether it has ever been equalled for intense yet unexaggerated force in action and expression.

We shall take another opportunity of noticing, more at leisure, the important collection of works by Girtin now on view at the club.

THE UNION OF THE ARCHITECTURAL SOCIETIES.

ARCHITECTURAL ASSOCIATION.

AN ordinary general meeting of the Society was held last Friday evening, the 14th inst., under the presidency of Mr. Birch, when Mr. Henry Skelmerdine was elected member.

A vote of thanks was passed to the churchwardens of St. Helen's, Bishopsgate, for the facilities afforded to the members on the occasion of their recent visit.

A letter was read as to the approaching Exhibition in Philadelphia.

Mr. S. Flint Clarkson (secretary) said that it had been thought desirable that the following correspondence should be submitted to the meeting:—

"Royal Institute of Architects of Ireland,
December 10th, 1874.

My dear Sir,—The question of certain reforms in the constitution of our Institute having been lately before the Council, I am directed by it to open communications with you, in respect to the most important of the desirable changes urged on us by some active members of our Society, and which have been received with favour. The Council are of opinion that it would strengthen the position and weight of our local society, and perhaps add some accession of influence to the Royal Institute of British Architects, if an arrangement could be effected by which, in the main, our body would be affiliated to it, recognising it as the parent and central society, and acting in conformity with your laws, professional code and practice, scale of charges, &c., by which we would be guided, and which, we believe, are now almost identical. (I enclose copies of our Bye-laws and the Scale of Professional Charges for your information.) The feasibility of such a suggestion being put in practice, is brought before us by the 'Chapter' system of the American Institute.

Our ideas are that, without any violent change in the constitutions of our body, or even in its designation, or without ceasing to exercise any of its local functions, it might be so merged into

the parent Institute as to become practically one; this process we would propose to effect by presenting for admission to the Royal Institute of British Architects all members of our local society desirous of joining it, leaving your Institute, under its existing bye-laws, or such relaxation of them as may be considered desirable, to elect into the different classes such applicants as may appear eligible for each; and our expectation is, that if a satisfactory arrangement could be effected, the main body of the fellows and associates of our Institute would be desirous of admission to the senior society, and would be admissible, and that a fusion would be practically accomplished in course of time, which would go to solve a problem, now, we have reason to believe, occupying the attention of your Institute in regard to all local and isolated societies.

The question of most practical importance to be discussed between us, should our proposition be entertained, will be a financial one, viz.,—To fix a rate of subscription to cover the fees to both the central and local societies, without being so high as to be a bar to the success of a scheme in which we all are so interested; but we submit that this may be accomplished somewhere after the manner in which clubs regulate the subscriptions of their foreign and military members. The Council are, however, of opinion that this is a detail for future discussion, and they cannot but feel confidence that your Institute, should it heartily take up the question of 'affiliated members,' if I may so call them, would not hesitate to vary its bye-laws in such respects as may appear necessary.

I have authority to lay our proposal before Council in this general form, and to invite further discussion on it. Could any practicable scheme be defined satisfactory to our respective Councils, we think we can assure you it would be accepted by our Institute. The present members on our list are 36 Fellows, 20 Associates, and 10 students.

GEO. C. HENDERSON,
Fellow and Hon. Secretary.

The Secretary,
Royal Institute of British Architects."

"16, Cloak-lane, London,
March 15th, 1875.

ARCHITECTURAL ALLIANCE.

Dear Sir,—You are probably aware that a short time since a committee was appointed by the Royal Institute of British Architects to consider the best means of extending the usefulness of that body.

A few days ago a letter, of which the following is a copy, was received from Mr. Eastlake, the Secretary of the Royal Institute of British Architects, enclosing a letter from the Royal Institute of Ireland, a copy of which is herewith sent:—

"'Royal Institute of British Architects,
Incorporated 7th William III.,
9, Conduit-street, Hanover-square, W.,
22nd February, 1875.

Dear Sir,—I send you enclosed the printed copy of a letter recently received by the Council of this Institute from the Royal Institute of the Architects of Ireland.

I am requested to beg that you will kindly bring the same under the notice of the Architectural Alliance, and obtain their official opinion on the proposed scheme of affiliation to this Institute, and the possibility of extending it to the leading architectural societies in the kingdom.

Awaiting the favour of your reply,

CHARLES L. EASTLAKE,
Secretary.

The Hon. Sec. of the Architectural Alliance.'

The question of the practicability of merging the local architectural societies into the Institute has repeatedly occupied the attention of the Alliance; and, in accordance with a resolution, a sub-committee of the latter held a conference with a sub-committee of the Institute in the year 1871; but, by the present constitution of that body, no satisfactory course could be arrived at.

There can be no doubt that it would greatly strengthen the profession if the Institute comprised the whole, or at any rate a large majority, of the practising architects in the United Kingdom; but it appears impracticable, if even it were desirable, that this should be accomplished by the dissolution of the several local architectural societies.

It would, therefore, seem that the most advisable plan would be, as suggested in Mr. Henderson's letter, to recognise the Institute as "the parent and centre society;" but before this could command the support of architects generally, and especially those practising in the provinces, there *must be such an alteration in the working of the Institute as would render it of real practical benefit to the profession.*

In order the better to illustrate some of the means whereby this must be accomplished, the following ideas have occurred to me, which I venture to submit for consideration:—

Facilities of membership by the recommendation of the president and council of the local societies.

The representation in the council of the Royal Institute of British Architects of architectural societies possessing a certain number of architect members.

The establishment of a board of arbitration of all matters affecting an architect's practice, at which the country members should be represented, and in cases of local custom the societies should be consulted.

The establishment of a committee, or some properly constituted authority, to examine and experimentalise upon new materials and inventions, with power to consult authorities thereon.

The establishment of a committee to watch all proceedings connected with the profession, and to publish and circulate reports to all the societies.

A reading-room at the rooms of the Institute, and means afforded to country members of writing and receiving letters, and interviews when in London.

The publication, as far as possible, of all papers read at the several societies, the editorship of which should be undertaken by the Institute.

The organisation of examinations at certain towns, as centres in the United Kingdom, under the supervision of local moderators, who would forward the examination papers to the examiners in London, under seal.

The interchange of visits from members of the several societies, and contributions of papers from the local societies to the Institute.

The establishment of some means whereby all respectable practising architects should be at once admitted members on payment of the usual fees, and in future admission should be obtained by passing a written examination, which, without being difficult, would show that the applicant was in a position to practise as an architect, except in cases of undoubted professional knowledge, as evidenced by executed works, or other cause satisfactory to the examiners.

You will please consider that the foregoing are not put forward in a cut-and-dried form, but are merely ideas, and submitted in order that they may be the means of eliciting the general opinion, and of producing other suggestions; and, although difficulties may appear at the outset, if the general principles are established, the details will doubtless follow in due course.

I shall feel obliged if you will take an early opportunity of bringing the subject of this letter under the notice of your society, and reporting to me thereon by the end of April (this, Mr. Clarkson said, was found to be impracticable), after which time the sub-committee of the Alliance will meet to receive the opinions of the several societies, and probably confer with the before-mentioned committee of the Institute.

J. DOUGLASS MATHEWS,
Hon. Secretary."

Mr. Mathews said that they were probably aware that about this time last year delegates were appointed with reference to the architectural alliance, and the letter just read, bearing his signature, had been the only action taken in the matter since the last conference, and he would be glad to hear of any suggestions that might be made with regard to the question. The Royal Institute of British Architects had sent to this Association suggesting that a conference might be held to determine the matter of the affiliation of the two societies.

The President explained that the reason the question had been raised in the professional papers before being discussed at the meeting of the Association was, that it had not previously been put forward in any definite form. As soon as anything material had been agreed upon by the sub-committees who had been appointed to discuss the matter, it would be submitted to the members.

Mr. Phené Spiers said that the letter of Mr. Robins's was published on that gentleman's own responsibility, and must therefore be looked upon as emanating from a private individual, and not as containing the views of the Association.

Mr. Payne deprecated the idea of the proposed fusion of the two societies, and thought that if such a step were taken on the part of the Association, it would be suicidal.

Mr. Todd considered that union was strength, and thought that if some scheme could be devised whereby the whole of the architectural societies could be conjoined, it would be well, and would generally impart strength.

Mr. Quilter then moved:—"That the subject of affiliation or fusion with the Royal Institute of British Architects should not be discussed at a general meeting until it has been before the committee for consideration."

Mr. Robertson having seconded this motion, it was agreed upon without being put from the chair.

A vote of thanks was then accorded to the delegates who had represented the Association in connexion with the Architectural Alliance, which was carried by acclamation.

This having concluded the "business" part of the meeting, Mr. Banister Fletcher read a paper on "Valuations of Property," a report of which we give under its own heading.

THE VALUATION OF PROPERTY.*

It might be said with safety, the reader said, that no branch of the profession was so open to fluctuation, was so little guided by set rules, or was so disheartening to the beginner, and to the inexperienced, as that of the valuation of property. The tyro having to give his opinion of the value of certain premises, would make a careful survey, minutely estimate the dilapidations, work out an elaborate calculation by the aid of the tables, and confidently declare the result, only to find to his confusion and dismay that that result differed to a very alarming extent from the estimate of old and experienced practitioners, to whose superior judgment he felt himself bound to defer without reservation. And this would probably be, because he had omitted from his consideration some latent but important element of which the experience of years and the keenness of insight which was attendant thereupon, had enabled his more practised colleagues to appreciate the due significance. And this in turn was because valuing was *par excellence* the branch of their calling in which lengthened observation and experience, *and these alone*, could impart the knowledge necessary to successful practice. The quantity surveyor having once acquired a thorough knowledge of his branch of the profession, knew that he was going through the same process as sufficed for his predecessor of several generations back, and that he might rely upon those same processes twenty or thirty years hence with the same confidence as to-day. Arbitrations, again, were governed by set laws, which, once known, might be taken as permanent guides. The same was true in perhaps a somewhat less degree of the practice of dilapidations. It was true that the feeling—if he might use the term—of the courts in course of years underwent certain slight changes, leaning now somewhat towards the lessor, and sometimes more towards the lessee (at the present time the latter was certainly the case), but still what was considered a dilapidation 100 years ago, in all human probability would be so considered 100 years hence. The land surveyor, too, availed himself of precisely the same operations and processes of applied mathematics, as served for their ancestors, and which, saving perhaps certain slight alterations caused by the increased facilities which the progress of science might afford, would continue to be practised long after every one in that room had been gathered to his fathers. But with valuations the case was very different. The valuer had no such set rules to which he might persistently and unswervingly adhere, with the glad consciousness that the more unswerving his adherence, the more unimpeachable would be the result of his labours. He might know that it was usual to value a certain class of property upon such a table, after making such and such deductions and allowances, and that it was usual to deduct from the result so arrived at the value of the dilapidations, and he might make this calculation with scrupulous exactness, and then be uncommonly wide of the mark. A successful valuer must expect no honour in his own house, for he must be a bit of a prophet, and calculate to a nicety the consequences of some alteration or improvement in the circumstances of a property, which, perhaps, at the time of his survey

* From a paper by Mr. B. Fletcher already referred to.

might be looming only very dimly in the horizon. A gift of prophecy could only be acquired by cultivating habits of patient observation, whereby alone could be gained that experience which was the indispensable qualification for a successful valuer. The following were the causes which might tend to the improvement of property,—construction of railways, new stations, tramways, new streets, canals, harbours, and piers, establishments of lines of steamers, of cemeteries, and of markets, widening of streets, enclosure and laying out of commons, erections of public buildings, theatres, mansions, good class of houses, improvement of drainage, fashion, and residences by titled people. On the other hand, the causes which tended to depreciate property were the following,—construction of railways, removal of railway stations, establishments of railways, works, coal depôts, gasworks, factories, hospitals, barracks, prisons, schools, and music-halls, brickmaking, erections of shops near a private neighbourhood, and of small class of houses, occupation of inferior class of tenant of good houses, and bad buildings. As a general rule, the construction of a railway would beneficially affect the value of the country and neighbourhood through which it passed by improving the facilities for access, and opening up the localities for commercial and residential purposes. This was particularly the case at the points in the line which were selected for the establishment of stations, as these at once become eligible sites for the erection of buildings, instead of being, as might theretofore have been the case, useful only for agricultural purposes. But it might be that a locality had become dotted over with gentlemen's residences, occupied by persons of good means, all able to keep their carriages and saddle-horses, and that the comparative remoteness of the neighbourhood from a station was an element of value, as tending to promote selectness and privacy. The establishment of a new railway station in the immediate vicinity of this select locality would obviously much lessen the value of the existing house property. Vacant sites would no doubt improve in value, because they would be suitable for the erection of smaller dwellings, to be occupied by clerks and business people, whom the new facility would draw from the neighbouring town; but their selectness being disturbed, the old residents would leave the neighbourhood, and their residences would be too large and expensive to suit the new comers. Again, where, as constantly happened, a line of railway would pass close to a property, but have no station, within moderate distance, it would operate as a disadvantage, as inhabitants would have all the inconvenience of the noise without any counterbalancing benefits. The effect of the laying of a line of tramway might also be much miscalculated. At first thought it might appear that its effect could not be otherwise than beneficial, and so it would be to a suburb which thereby gained an additional and convenient means of access to central parts. But the effect upon the thoroughfares along which the line passed must be very different. It was a complaint of the shopkeepers in the Old Kent-road, when the tram-cars first began running along that thoroughfare, that chance customers who formerly walked past their shops morning and evening, on their way to business and back, were now carried past them in the cars, lured by the comfort and cheapness of the accommodation, and that the consequent falling-off of business was considerable. The same remark applied in great measure to canals, which, while their construction was no doubt in a high degree beneficial to places by their means brought into direct communication with commercial centres, and in and about which land would consequently greatly increase in value, might nevertheless exercise a detrimental influence on residential property lying near the line of waterway, a certain amount of dampness and consequent unhealthiness being almost inseparable from such vicinity. The establishment of harbours, piers, and lines of steamers, calling at the harbours and piers so established, could hardly fail to improve the value of property, enhancing as they did the commercial importance of the localities, and rendering them suitable and easy of access as watering-places. Strange to say, the establishment of cemeteries almost invariably enhanced the value of land and property in their neighbourhood; and this was particularly to be noticed in the cases of Norwood, Woking, and Highgate. As to the effect which markets would have on the surrounding property, he would instance the increase in rentals which the establishment of the New Wool Market in Coleman-street had occasioned, by inducing those interested in that trade to seek offices in the street or in the immediate vicinity. On the other hand, see the depressed character of the property surrounding Farringdon Market. Indeed, it would generally be found that the effect upon the neighbourhood was dependent on the success or otherwise of the market, although he was bound to say, while alluding to one of the most unsuccessful undertakings of modern times,—Columbia Market,—which had so signally failed to realise the benevolent intentions of its high-minded and public-spirited founder, that undoubtedly the value of property in its neighbourhood had increased. This would also be further proved by the important improvements arising in the vicinity of the Meat Market, and also the extension of Billingsgate Market. Few points would more severely tax the prescience of the valuer than the effect on property of new streets, affecting it as they did in such an infinite variety of ways. He could hardly estimate the effect of the new street now in course of development from Bloomsbury to Shoreditch. Few of his contemporaries, he believed, realised the wonderful alteration in value of property which followed the construction of Commercial-street, where, by the formation of a new street, plots of ground which formerly had no frontage at all, or only to back streets, became possessed of frontages to new and important thoroughfares; the increase in value was of course prodigious, but what was hardly sufficiently thought of, was the depreciatory effect exercised upon property in the old streets in the neighbourhood by the formation of new channels for the traffic which formerly passed through them, and by the sudden throwing into the market of a large quantity of new shop, office, or warehouse property, for sale or letting. This effect was at the present time being felt in Cheapside, and in the neighbourhood of the new Queen Victoria-street.

Turning now to consider the widening of existing streets, an excellent illustration of the difficulties here met with was presented by one of the latest projects of that able body, the Metropolitan Board of Works, which had so much improved London, and yet without raising a hue-and-cry about the waste of public money—he referred to the widening of Harrow-road. All the surveyor's theories of value, based upon knowledge of the locality as now existing, must be thrust aside; he had to deal with the future, and all his knowlege of present local value was wide of the mark. He had now to value on an entirely new basis. He had to pay regard to the more limited area to be occupied by buildings, to the probability of that area being required for different purposes, in consequence of the alteration. Here tables and mathematical calculations utterly failed, and a large and varied experience was the only guide. With regard to the effect on surrounding property, by the action of the Metropolitan Board or other local authority in converting commons and waste spaces into public gardens, the difficulty which met the valuer was not "what will be the effect of the alteration?" but "to how great an extent will property be improved?" as deterioration could hardly result from this cause. Another source of disturbance to the calculations, or even the most astute surveyors, was and must be the unexpected decision of Government or of local bodies as to the position of new public buildings. He need hardly refer to the great dispute as to the site for the New Law Courts. Upon the ultimate victory of the advocates of the Carey-street site, on the one hand, or the Embankment site, on the other, depended a difference of from 80 to 100 per cent. in the value of the property adjacent to their respective locations, and he was a skilful valuer indeed who could nicely balance the chances and effects. The Albert Hall in the west and the new Post Office in the City, again, had affected land in their vicinity to an extent which surveyors would have been ridiculed for suggesting as possible but a short time since. Again, as to the "Brompton Boilers," who could have foreseen that so small a beginning would lead to such great results, raising the value of property in the neighbourhood by an enormous per centage?

The influence exercised by the erection of a theatre would depend very greatly upon the character of the neighbourhood, as it was obvious that while it would hardly operate beneficially upon the value of houses in a "quiet square," a locality of a less private and select stamp might be favourably effected. The erection of a mansion of importance would very often greatly improve the value of property in its vicinity; or, if established in a country place, would even create a neighbourhood. The building of a number of houses of a superior class would improve the value of land in the neighbourhood, and also that of the already existing house property, always providing that the houses built are not *too* good, *i.e.*, too large and expensive for the locality, in which case they would probably ultimately exercise a contrary effect, as after standing empty and perhaps unfinished for an indefinite time, they were let for much less than the rent which they were built to fetch, fall into the hands of tenants who could not and did not care to keep them up properly, and end by being blots and eyesores to the neighbourhood. The improvement or construction of a system of drainage in a neighbourhood could not, of course, affect the value of property otherwise than beneficially. One of the most perplexing, uncertain, and yet most powerful causes of alteration in the value of property was fashion. Occupation by titled folks had a much greater influence on neighbourhoods than might be supposed. In spite of the democratic tendencies of the times, people still "dearly love a lord," and loved still more dearly to live in the same terrace, or even street or road, as his lordship. Speculators, as a rule, were well aware of this, as the following amusing paragraph would show, which he met with the other day:—"Few people, except the Wandering Jew have the constitution of the nobleman who is said to have lived for many years almost rent-free, by constantly moving from one new house to another. His friends thought he was suffering from some obscure disease of the brain; but the builders' agents found him a capital decoy-duck. As soon as they told a wavering client that Lord So-and-so had taken a house in such a terrace, the houses in the terrace were immediately at a premium, particularly those on each side of his lordship. In fact, builders find it an excellent speculation to give a good house cheap to a tenant with a title, and are thankful even for such small mercies as a knight's widow." Few localities had been so much affected by the influence of fashion as the "Five Fields," which was now known as Belgravia. Those marshy fields which, he thought he was right in saying, were held on such terms that their owner parted with them to the celebrated Mr. Cubitt for a bottle of port wine, and which he, by building important houses thereon, developed into the property they now saw, with the result that houses in the *vicinity*, which formerly let at 32*l.* per annum, had been let at 250*l.*, with a premium. There was a commercial as well as a social fashion, as was plainly evidenced by the changes which had taken place within the memory of many of those present in the neighbourhoods of St. Luke's and Southwark.

With regard to the causes which were likely to operate to the disadvantage of property, gasworks and factories tended greatly to depreciate the value of the property near to which they might be placed, unless the property happened to be of a small and poor class, in which case its value might be increased, owing to the demand for dwellings for the workmen employed in the adjacent establishment. The effect to which the employment of a large number of men in any one spot would affect the neighbourhood was well illustrated in the case of Deptford, Charlton, and other parts near the dockyards, where the demand for and consequently the value of property varied with the activity or otherwise of Government works to a remarkable degree. A more striking illustration of the damage which might be done to a good class of property by the establishment of a coal depôt could hardly be found than that at Twickenham, where the depôt was so placed as to face on the other side of the line villas, which had never since let. The fact that by legislation most of the objectionable manufactures had been prohibited within populous districts, showed the tendency of the public mind to desire that these should, if possible, be altogether kept away from the vicinity of residential property, and most of them would have met in their experience instances of the great detriment arising to residential property of a decent class from the proximity of a factory. Probably few sources of annoyance more seriously affected property than the proximity of gasworks. The frightful injury to a man's garden arising from this cause might perhaps deprive him of one of his principal sources of enjoyment on his daily retirement from town and mental toil. Coming now to hospitals, he refrained from referring to the painful controversy as to Hampstead, because it was so recent and still so

undecided that it hardly came within the limits of fair discussion. But the excitement created, and the greatly varying statements as to effect on the value of land, should it be placed in the spot proposed, showed most conclusively how great an influence such a consideration as this might have. The great disputes which had arisen as to the placing of barracks at Oxford and Worcester showed how serious might be the effect of such occurrences as these upon the value of property; and at Milton-next-Gravesend, also, was a remarkable instance of the damaging influenced exercised upon what was formerly excellent property, by the establishment of a kindred institution,—he believed a military hospital. Of the effect of the proximity of a prison upon the surrounding neighbourhood, there was no need to speak, but when they approached schools, especially School Board schools, they tred on delicate ground. That the education of the children of the people was a paramount duty of the State had long been his opinion, but whether a School Board school was or was not a serious injury to the surrounding property, he refrained from expressing an opinion upon. Some there were who would and did assert that from the congregating of from 600 to 800 children into a playground, the noise from which irritated the surrounding neighbours, with the possibility that the playground was of too limited an area to accord with the desires of the rising generation, who consequently did not scruple to over-run the adjacent streets and roads in its extended gambols, was a positive advantage. The establishment of a music hall in the neighbourhood of respectable property must manifestly tend greatly to depreciate its value, but might have a directly contrary effect upon a poor or low neighbourhood. Brickmaking, though decidedly calculated to damage property in the vicinity of which it was carried on, was generally merely a temporary inconvenience. Should, however, the earth be of such a character or the land of such an extent that the manufacture might continue for some years, unquestionably a serious deterioration in the value of the adjacent property might result. How often was the owner of a few only of the houses in a terrace annoyed by finding that another owner was bringing out shop-fronts, having obtained the necessary consent from the Board of Works, while perhaps he himself was prevented from doing the same by prohibitory covenants in his lease. It was obvious that great detriment would arise to the owner of the private house in such a case, yet who could prevent it? Such restrictions showed the necessity of those lending money on the security of property which might be hampered by such prohibitions, seeing that the neighbouring property was under like restrictions, or that shops were not likely to be required. As to the effect of a small class of property, often had a client of his, contrary to advice, having land on one side of a road, neglected to purchase that on the other, at a reasonable price, but proceeded to build on his own land, what was no doubt the requirement of the neighbourhood, handsome detached or semi-detached villas, contending that if he built that class of house the other owners must do the same. Having built his villas, and exulting in prospects of success, which the rentals obtained appeared to fully justify, he was surprised to find one morning that the foundations were being laid on the opposite side for a number of small cottages, or perhaps some stabling, and that the advice given him had been only too prophetic. As to the effect upon his property, if the new buildings be carried out it would probably be to diminish the value some 30*l.* per cent.; the matter generally resulted in his purchasing the opposite land at about double the price originally asked. With respect to "bad buildings," the valuer must have regard altogether irrespective of the dilapidations, which he would of course estimate separately, and which might exist as well in good property as in badly-built houses. Modern builders, as a rule (he referred, of course, more particularly to the speculating class) displayed great ingenuity in concealing their bad building,—a talent, he might almost say, worthy a better cause. Some of the non-professional papers were becoming alive to these dangers, and the following paragraph from the *Saturday Review* of March 27th was amusing and to the point:—"When summer comes our young couple find what sort of wood has been used in their house. It is unseasoned and badly joined. If the hall-door faces south, the postmen is soon able to put the letters through the cracks in the panels, or to slip the newspapers under or over the door, whichever he prefers. The children lose their money in the crevices of the stairs, and missing tea-spoons are found in the gashes which open in the pantry slabs. There is always at least one door in a state of insubordination, and the bolts and their holes refuse to have anything to do with each other. If there are any shutters they cannot be fastened, for they do not meet, and the carpets are cut through as with a knife, owing to the distance between the gaping boards of the floors. The cupboards let in the dust, and smell of return smoke because the flues are not properly plastered, and the rooms are so full of draughts round the surbase that it is impossible to do without fur footstools. The slates will soon begin to blow off, for they are probably put on with galvanised iron nails, on which the atmosphere of London tells with fatal effect; and when our young couple have paid for all the repairs, they will, if they survive, find that they might as well have given 50*l.* a year more for a better house, and saved their time and temper."

The changes which took place unaccountably in the natural passage of time had to be weighed by the surveyor. In 1803 the freehold of a house in Cockspur-street was sold for 650*l.*; that sum to-day was about its annual rental value. Could anything show in a more startling manner the change of value in this street during the past seventy years? And yet neither the fee value nor the present rental value were by any means exceptional. Forty-two years ago a house was let in the same street for 200*l.* a year, but now the same house commanded three times the rent. Land at Chiselhurst, which was purchased twenty-five years ago for 70*l.* an acre, the owner now refused to sell for 1,000*l.* an acre. As to land in the City, the rise was astonishing. In a court leading out of Old Broad-street, the present yearly rental was about equal to the value of the fee of the house in the year 1871. The student would meet with great disappointment if he endeavoured to derive bases for his future guidance from the concurrent (?) testimony of experienced men as to the value of any given property. Mr. Fletcher contended that the annual outlay for repairs should be taken for a number of years, and the total amount of such outlay divided by the number of years, which would, of course, give the average annual outlay, or the true allowance to be deducted from the income for repairs. This, of course, on a large estate, became an important item, and therefore the necessity was all the greater for a just and sound basis of calculation. He contended in all matters, great or small, for a basis which could be fairly justified, and objected *in toto* to the "happy-go-lucky" system, which now obtained favour with so many, and which had had in its favour only two points, viz., quickness, and that it could be readily used by those who had no special or technical knowledge. Was it fair of surveyors of good standing to give favourable evidence, as was often the case, merely for the purpose of aiding those for whom they were usually retained, viz., the various railways, the Metropolitan Board of Works, the London School Board, and other influential bodies, who were constantly acquiring property, and to persistently shut their eyes to the improvement in the value of land and property? Was it right that they should, under such circumstances, say that they did not believe any permanent improvement had occurred, when in their private practice they would not let their clients' land at the old rentals. It might be said that surveyors for claimants were equally unjust. At all events, it was on the side of the powerful body taking the land that the leading surveyors were generally found, and it appeared to him no exculpation of *their* proceedings, if they could only say that the lesser men did the same. Where were they to look for probity and honour if not to those whose age and position had placed them in the foremost rank?

Mr. J. Douglass Mathews said that the question of the valuation of property was a very important one, and came more or less before every architect, so that it was absolutely necessary to obtain, as Mr. Fletcher had pointed out, a thorough knowledge of the subject. A great deal in valuing depended upon the future of a place, which was an important question to be studied. In fact, the whole subject showed them that it was of vital importance to the profession and was not to be guided by any "rule of thumb," but only by experience.

Mr. Lovegrove was of opinion that School Board schools depreciated the value of property very materially.

Mr. Todd considered that the bad buildings erected by speculative builders were becoming very common, which he attributed to what he termed the vicious system at present in vogue of land-letting, varying as it did from fifty to ninety-nine years.

Mr. Payne thought that Mr. Fletcher ought to have mentioned the fact that the discovery of minerals upon land had a very beneficial effect in improving the value of property.

POROUS SITES FOR BUILDINGS.*

IT is usually undesirable to recommend medical works to general readers, but we would like every architect and builder to get this book and make himself master of its contents. We do not say this because it contains any wonderful panacea or new-fangled theory, but because in the first place it endeavours to show on rational principles how prevention may best be secured, and further because of its practical character; and of the amount of valuable information that it contains on subjects useful to all. Dr. Hime, in his introduction, directs attention to the ground air and ground water, and throws fresh light upon several important matters hitherto not sufficiently attended to in connexion therewith. Many will at first sight hardly be prepared for his objection to the no doubt common supposition "that atmosphere ceases where the ground begins." And yet he is perfectly correct, for as he observes, "Gravel soil, though apparently so solid and able to support large buildings, is, in reality, often little more than semi-solid. A very compact gravel will consist of pores or air-holes to the extent of one-third of its bulk." In a lesser degree this is true of all light soils. So that a house built on such a foundation stands on a sort of honeycomb, and the combined volumes of these air-spaces existing under a good-sized house must be enormous. The importance, in a sanitary point of view, of fully realising this cannot be overrated, as such a soil will absorb like a sponge such substances as are allowed to percolate into it from above. When we think of the immense quantities of sewage that are allowed to soak into the ground in towns from ashpits, middens, &c., the question is brought home to us as one of immediate practical importance. Even solid stones are very porous, which only means that they contain a large proportion of air-holes.

A building stone much used in Sheffield, Dr. Hime finds will absorb 5 or 6 per cent. of its weight of water, and a new brick as much as half a pint. This porosity is stated to be the means of an active ventilation *through the walls*. For a wall of dry bricks we may calculate for each square mètre (=1·196 yards) of outside wall; and for each 1° C. difference of temperature between the interior and exterior of the house, that from 55 to 56 gallons of air will pass through the wall of every house. If, however, the wall be damp, all passage of air is stopped; hence one great disadvantage of damp walls. If water will readily pass through the ground, so will air, which is 776 times lighter and more movable. Much more readily will gases do so, which are lighter even than air. The importance of this will be seen from Dr. Hime's statement (p. 12), that "just as hot-air passing through the chimney causes a current of air from the room, so the warmer air within our houses causes a current to flow from our cellars and from the ground beneath them, when the temperature is sufficient," which is generally the case in the autumn, winter, and spring. Of course, pure air cannot come from a polluted soil; and we thus see how, quite independently of traps, &c., foul products are conveyed into our houses from the sewage polluted soil.

Experimental proofs of this are given. As this current of ground-air cannot be prevented, two courses naturally suggest themselves; firstly, to maintain the soil pure, and thus render the ground-air innocuous; and secondly, to divert the current so as to obviate the dangers arising from it.

Dr. Hime mentions, with approval, a plan which many, especially speculating builders, would object to on the score of cost, which is that the floor of the cellar (which must be made as air-tight as possible) should be raised about 1 ft. from the ground, and that an air-flue should be carried from this chamber into the kitchen

* Cholera: how to Prevent and Resist it. By Professor Max von Pettenkofer, President of the Sanitary Committee of the German Empire; translated, with Introductory Notes, and Appendix on the International Conference of Vienna, by Thomas Whiteside Hime, B.A., M.B., &c., Lecturer on Obstetric Medicine, &c., Sheffield School of Medicine. London: Baillière & Co. 1875.

chimney-stack, so as to be kept in operation by the heat of the kitchen-flue, or other flue that may be in constant use.

The principal part of Professor Von Pettenkofer's theory of cholera is that he regards the locality as the essential element in the development of epidemic cholera from the imported poison. The Royal Commission which investigated the epidemic in Bavaria in 1854 ascertained that epidemic cholera only occurred in places situated on porous soil, permeable to air and water, while places on impermeable soil escaped. Many towns are known to enjoy immunity from this plague. Von Pettenkofer remarks that people cannot, of course, continually change their residence; but knowing the danger arising from their situation, it behoves them to be especially careful in avoiding sewage pollution and other insanitary measures which favour the growth of cholera, although they will never originate it any more than fever. Valuable information will be found of the subject of dietary, drinking water, sewage, ventilation, and even of clothing, the latter article being highly instructive. Disinfection is also treated of; but it is observed that it is not to be regarded as a specific, as the poison cannot be any longer supposed to reside only in the excretion. Sulphate of iron, alone, or mixed with about one-quarter its weight of crude carbolic acid, is especially recommended for disinfecting privies, sewers, and so on.

The various subjects referred to in this book are treated in a scientific manner. It is practical in its character, and altogether one which we have great satisfaction in recommending to all who feel interested in sanitary matters.

A BRICK FRONT IN THE POULTRY.

THE premises in the Poultry, occupied by Messrs. Delaterre, have just been rebuilt, with a frontage to the Poultry of an original character. The materials used in the elevation of the old premises consisted altogether of timber, but the new structure is built of red brick, with Dumfries stone dressings. The building is very lofty, including four stories and dormers above the ground-floor. Each floor contains a mullioned five-light window, and on the face of the elevation, between each floor, there is a long bas-relief, in a panel. The panels are in red terra-cotta, each being 16 ft. long and 3 ft. in height, and the figures and groups are supposed to represent scenes that have taken place in the Poultry. The panel in the upper portion of the frontage represents the procession of Edward VI., on the 24th of February, 1546, from the Tower to Westminster, upon the occasion of his coronation. The panel immediately below represents the procession of Queen Elizabeth entering London in State, on the 28th of November, 1551. The next represents an incident said to have occurred upon the site of the house in question, upon the occasion of Charles II. making his public entry into London, on the 29th of May, 1660, when he saluted the landlady of what was then an inn, who insisted upon welcoming the king, although in a state of great suffering. The bottom panel represents the procession of Queen Victoria upon the occasion of opening the Royal Exchange. Some of the groups might have been better modelled, especially the most modern one, nearest the eye. Mr. F. Chancellor is the architect of the building, and the contractor is Mr. Bland, of Metropolitan-buildings; the bas-reliefs were executed by Mr. Kremer, of Augusta-square, Regent's Park. The general result is very praiseworthy.

THREATENED DESTRUCTION OF CÆSAR'S CAMP AT WIMBLEDON.

THE well-known Cæsar's Camp on Wimbledon Common is threatened with destruction, and the probability is that unless active measures are immediately taken to prevent it, the site known as the camp will shortly be covered with bricks and mortar. A large portion of the ground has already been fenced off, and a considerable number of trees cut down. The camp occupies a position almost in the centre of the Common, and is several acres in extent. It is enclosed by an embankment at present covered with grass, but which originally consisted of two earth walls, with a deep trench between, and some portions are still perfect. It is surrounded by trees, which have grown up within and on each side of the camp, but, as above stated, several of these have just been cut down; building has actually been commenced, one or two houses having already been erected on the edge, and within the last few days excavations have been commenced within the camp itself, and bricks and mortar have been carted on to the enclosure. Efforts are, however, being made to preserve the camp from mutilation and destruction, the Wimbledon and Putney Commons Conservators having filed a bill in Chancery to restrain Mr. Dixon (who it is stated is a lessee for Mr. J. S. W. S. Earle-Drax, the owner of the ground) from commencing building operations, and we understand that this proceeding will test how far the Commons Conservation Act applies to the preservation of the camp.

THE METROPOLITAN DISTRICT RAILWAY COMPANY'S EXTENSION LINE FROM HAMMERSMITH TO THE SOUTH-WESTERN LINE.

DEVELOPMENT OF BUILDING LAND.

AFTER encountering a strong opposition, the Bill of the Metropolitan District Railway Company, for constructing a short new line from their Hammersmith Station to the Shaftesbury-road Station of the South-Western line, so as to give more direct communication between the Mansion House Station and Richmond, successfully passed through Parliament. From the evidence given before the Parliamentary committee, it is confidently expected that the construction of the line will be the means of building on a very large scale being carried out in the neighbourhood of Richmond and the immediate district. Mr. Venables, in opening the case on behalf of the promoters of the undertaking, said that the line was a very short one, being less than half a mile in length, and its estimated cost,—250,000*l.*—for such a short line might sound a good deal, but it passed through Hammersmith, and the nature of the works and the amount of the compensation which it is necessary to give required a very large outlay, which, however, would bring a large traffic on to the existing Metropolitan District Railway.

Amongst the witnesses examined in favour of the undertaking was Mr. Joseph Sims, a builder, residing at Richmond. He said, the line would not only be a very great advantage to the public at Richmond, but also to the whole district traversed. It would be the means of greatly developing the value of the property in Richmond and the neighbourhood.

Mr. John Maxwell, one of the largest owners of property in Richmond, also gave similar evidence, and observed that the population of Richmond was now 15,000, and was largely increasing. There was considerable agricultural land not built over between Richmond and the proposed new route, and this land would come into building land through the railway being made. He anticipated that building, more especially on the Crown lands, would be enormously developed.

Mr. John Shields Gomme, a large owner of property in the neighbourhood of Hammersmith, said he was well acquainted with the country between Hammersmith, Gunnersbury, and Richmond. There was a large amount of land there well adapted for building, which would be developed by having a good service of trains over that route. In answer to a question as to the present Hammersmith Station of the South-Western Railway, he stated that a more inconvenient station could not have been built. It was more like a treadmill. He added that he was agent for a large extent of property at Bollow Bridge. There was a very great amount of property built there, which was obliged to be underlet because it had no outlet to London, except by the Great Western or North London, and the proposed route would give a greatly improved outlet. In that district there was a large extent of land available for building, not only at Bollow Bridge, but also at Gunnersbury and to Kew Bridge. He was of opinion that to have a communication by means of the District into London would raise the landed property 25 or 30 per cent. in value.

Several other witnesses of a similar character were examined, after which evidence in opposition to the Bill was taken, one portion of which was given on behalf of the Metropolitan Board of Works, who opposed the project more especially with regard to the alterations of the levels in some of the streets in Hammersmith, and the steep gradients which it was proposed to make. The Bill was further opposed on the ground that the Mansion House-street Station was not large enough for the increased traffic which the opening of the proposed line would bring.

The committee in passing the preamble of the Bill intimated to the promoters that if there were any powers in the Metropolitan District Company by which the Mansion House Station could be improved and enlarged, they thought those powers ought to be exercised.

THE METROPOLITAN BOARD OF WORKS IMPROVEMENT BILL.

THE Bill promoted by the Metropolitan Board of Works, called the Various Powers Bill, which has been sanctioned by Parliament, authorises the Board to carry out several improvements of an important character. One of these is the opening out of better communication with the Thames Enbankment, in the neighbourhood of Savoy-street. Savoy-street is to be widened by setting back the easterly fence of the burial-ground, belonging to the Chapel Royal, Savoy. Part of the site of the German Lutheran Chapel is also to be added to the street, and Savoy-street is likewise to be extended to the Embankment. Under the Bill the Council of the Duchy of Lancaster, who are interested in the property in the neighbourhood, are empowered to remove the coffins and remains from the chapel and burial-ground, and re-inter them in some other grave-yard or cemetery, and also to provide buildings elsewhere in substitution for the chapel, and minister's house, and school-house premises.

Another portion of the Bill confers special privileges on the representatives of the Inner and Middle Temple, who are about to erect new buildings facing the Embankment. Harcourt Buildings, in the Inner Temple, are about to be extended to the northern boundary of the land reclaimed from the river for the Embankment, and Plowden Buildings, belonging to the Middle Temple, are about to be extended in a similar manner; and the section of the Thames Embankment Act of 1862 has been so far modified in the Bill just passed as to admit of the Society of the Inner Temple constructing an ornamental tower at the south-eastern extremity of the buildings proposed to be erected in extension of Harcourt Buildings, also an ornamental bay window, and the eastern pier of an ornamental central arch. Likewise, to admit of the Middle Temple authorities constructing in a similar manner at the south-western extremity of the buildings to be erected, in extension of Plowden's Buildings, an ornamental tower, bay window, and western pier of central arch, all uniform with those to be erected at the south-eastern extremity by the Inner Temple authorities. The towers are to be allowed to project 10 ft., and the bay windows and piers 5 ft., on to the lands referred to in the Thames Enbankment Act.

The Bill likewise contains provisions giving the Board and the Deptford Creek Bridge Company power to extinguish the tolls upon the bridge, and throw it open to the public as a free bridge.

PAINT AS AN ENGINEERING MATERIAL.

IN a paper on this subject, by Mr. Ernest Spon, read at the Society of Engineers, the author, in the first place, considered the necessity for the use of paint, and then noticed the composition and characteristics of the pigments usually employed by engineers. White lead, he observed, should be of good quality, and unmixed with substances which may impair its brightness. It is usually adulterated with chalk, sulphate of lead, and sulphate of baryta, the latter being the least objectionable. Zinc white is not so objectionable as white lead, but is dry under the bush and takes longer in drying. Red lead is durable and dries well, but should chemica action commence, it blisters, and is reduced to the metallic condition. Antimony vermilion was suggested by the author as a substitute for red lead, and its qualities enlarged upon. Black paints from the residual products of coal and shale oil manufacture, and oxide of iron, paints are generally used for ironwork, for which purpose they are peculiarly suited. Allusion was also made to anti-corrosive paints, and to those containing silica. Referring to the oils used in painting, the author stated that linseed oil was by far the most important, and that its characteristics deserved careful study. It improves greatly by age, and ought to be kept at least six months after it has been expressed before being used. It may be made a drier by

simply boiling, or by the addition of certain foreign substances. Nut oil and poppy oil are far inferior in strength, tenacity, and drying qualities to linseed oil. The author noticed the driers employed, and alluded to the properties and means of testing the purity of spirits of turpentine. He then dwelt at length upon the mixing and practical application of paint to new and old woodwork, the preservation of cast-iron by means of Dr. Smith's pitch bath, and the cleansing, painting, and care of wrought-iron structures. He stated that when used under proper supervision no better protection could be found for iron structures than oxide iron paints. He concluded by observing that the real value of any paint depended entirely upon the quality of the oil, the quality and composition of the pigment, and the care bestowed on the manufacture; and that the superiority of most esteemed paints was due to these causes rather than to any unknown process or material employed in their preparation.

ANTIQUITIES IN GOTLAND.

A RESIDENCE of some duration in Sweden, and some acquaintance with the language, has thrown in my way several valuable sources of information relative to architectural matters in that country which are unknown to the majority of English critics. From these we can form an idea of the great interest the Mediæval remains of the island possess, whether we consider their quantity, their quality, or their singular position, in a province so isolated, and so far north.

Professor Brunius, of Lund University, the restorer of Lund Cathedral, has visited the island and fully described it in a work entitled "Gotlands Konsthistoria," in three vols., published in 1864, 1865, and 1866. The contents of these volumes are as follows:—Vol. I. A summary of works, &c., illustrative of Gotland and its antiquities. A glance at the island and its history. A general review of its architecture. Separate descriptions of the Wisby churches, town wall, &c.

Vols. II. and III. are occupied by separate and precise descriptions of the ninety-seven country churches, dating from the eleventh to the fifteenth centuries inclusive, which exist in this island of about 1,200 square miles area; only six of these churches are in ruins. Amongst these churches are found twenty-two containing altar-screens, thirty containing roods or crucifixes, ten containing wall paintings, twenty-one containing remains of painted glass,—all of Mediæval workmanship.

The one drawback in this matter is the fact, much to be lamented, that, practically speaking, there are no published illustrations of the numerous and interesting remains on this island. The few drawings that do exist serve only to make the want more sensibly felt.

HENRY FIDLER.

VENTILATION.

SIR,—I ask to be allowed to address some few remarks bearing upon the important subject of ventilation, which, since the notice that appeared in the *Times* on the 12th ult., of what is called Tobin's system, has attracted a large amount of public attention.

From the graphic account which the writer gave of the system, and from subsequent letters and articles which have since appeared elsewhere, it would seem that the carrying of an air-current by means of tubes, directly towards the ceiling of a room, is regarded by many persons as quite new, and they look upon the invention as due to Mr. Tobin. Now, I submit that there is nothing new in it, for there is scarcely a prison in England where the principle has not been carried out in some modified form, though in no case by means of tubes carried up within the cells, but by means of tubes or air-conduits formed in the walls of the cells, and terminating at about 2 ft. below the ceiling. To my knowledge, this was done so long ago as 1842; but then no attempt was made to introduce a volume of fresh air, without at the same time making ample provision for the withdrawal of an equal volume of vitiated air. The late Sir Joshua Jebb, who introduced the system at the New Model Prison, knew perfectly well that no plan of interchange could be established and maintained, except under conditions that were controllable; and he also found, by experiments, that the measure of interchange, to be free from draughts and other objectionable features, was mainly governed by the areas of the ingress and egress openings, which should be equal, and should always be determined, not only by the cubical content of the building, but by the number of persons to be accommodated.

In Mr. Tobin's system there appears to be no method of exhaustion, provision being made for the admission of the external atmosphere, and from small openings in the ceiling tubes are carried directly out into the open air, thus paying no regard whatever to the difference in specific weight, due to the temperature of the inside and outside atmospheres. This is not to be wondered at, since Mr. Tobin in the account referred to, appears to condemn what he calls "scientific ventilation"; he says, "it has always been at fault;" but I suspect that Mr. Tobin has really never duly considered a plan of ventilation based upon science. I would, therefore, urge him to pay a visit to Salford Gaol, where he might see a plan of scientific ventilation carefully carried out, and in operation. It was built about eight years ago, from plans prepared by Mr. Alfred Waterhouse.

The surgeon (Mr. Braddon) in his report to the Justices, some time after the prison had been occupied, and the system thoroughly tested, stated, "that although the public health generally had for some time been unusually bad, and the mortality proportionally high, yet the amount of sickness in the prison had been below the average, and but few cases had been of a severe character"; then, after quoting figures, he goes on to say, "that he attributed the low rate of sickness and mortality to the system of heating and ventilation which had been adopted."

Now, without directly condemning Mr. Tobin's pressure system, as it is called, permit me to state a few facts, which I have gained after subjecting the system, as carried out at the Police Courts, Liverpool, to a careful and accurate test. For this purpose I paid a visit to the courts on Saturday afternoon (May 1st). Both courts had been used during the morning, and both had been equally crowded. I went first into the one which had been fitted with the new system, and had Mr. Tobin been there, he would, I think, have admitted that the place was exceedingly close and stuffy. I applied an anemometer to each tube several times during the afternoon. In nearly all the flow of air was found to be intermittent, and in one or two of the tubes there was at times a tendency to return; one appeared choked, for it scarcely affected the anemometer in any way. To secure accuracy in measurement, each tube was successively connected to the anemometer by an india-rubber case, which fitted the pipe and instrument perfectly, so that no air could pass into the court, except through the anemometer.

The quantity of air delivered by all the tubes (nine) was, as near as possible, 46 cubic feet per minute; the aggregate area of the nine tubes only amount to 134 square inches, and the velocity of the air in them varied from 10 ft. to 160 ft. per minute. The court contains 26,400 cubic feet of space; so that over nine hours would be required to change the whole atmosphere; whereas at Liverpool it ought to be changed at least three times in the hour.

The adjoining court felt perfectly fresh and wholesome,—this I found to be connected to a large ventilating shaft, in which the air is rarified by a huge fire, that is kept burning at its base; I hung the anemometor in the main foul-air flue a little beyond where it enters the hot-shaft. There it indicated a quantity of air passing off from the court equal to 2,600 cubic feet per minute, thus giving an interchange, at the rate of a little over five times the cubical content of the court in the hour.

With regard to the lowering of the temperature, upon which Mr. Tobin lays great stress, it was proved during the late severe weather, that the loss due to the tubes was from 10° to 12°. Nor could the court be raised to the required temperature of 60°, with the utmost exertions, even when carried on under Mr. Tobin's personal supervision.

But quite apart from these facts, I contend that there is nothing original in the mode of delivering the air in Mr. Tobin's system; the plan might be seen in many places. It is so in the large reading-room of the British Museum, and it was designed for the new Town Hall here (Manchester), long before Mr. Tobin's system was heard of.

With these few particulars I am content to leave the matter with those who know something of science; but it must be manifest to all who are conversant with the subject, that a building ventilated upon the principle of the Liverpool Court would not only be subject to all the variations in temperature of this variable clime, but would be liable to all those evils which the writer of the notice in question so ably condemned, as there would be no adequate supply of that all-important and vitalising element, the oxygen of the atmosphere. F. B.

NEW PIERS AUTHORISED BY PARLIAMENT.

A BILL is now in the House of Lords, having passed the Commons, confirming several Provisional Orders granted by the Board of Trade under the present Pier and Harbour Act, authorising the construction of new piers at the following places:—

At Bournemouth, the Bournemouth Promenade Pier Company (Limited) are empowered to construct and maintain a pier, 900 ft. long, with landing-place and all necessary works and conveniences suitable for embarking and landing passengers and their luggage, commencing at the east side of the toll-gates of the existing pier at that place.

The Clacton-on-Sea Pier Company are authorised to extend the existing pier at the little watering-place on the Essex coast for a distance of 170 yards. If the works are not "substantially commenced" within two years from the date of the passing of the Act, or if, having been commenced, they are suspended for twelve calendar months, the powers of the Order are to cease, except in so far as it relates to such portion as may be completed.

At Folkestone, a pier with a landing-stage and all necessary works, commencing opposite Cheriton-place, and extending 800 ft. seaward, is projected by the Folkestone Promenade Pier Company (Limited); and at Hythe, Southampton, the Hythe Pier and Hythe and Southampton Ferry Company (Limited) are authorised to build a pier, jetty, or landing-stage, as it is variously termed in the Bill, to commence at a point thirty yards east of the toll-house standing in front of the Drummond Arms Hotel, and passing in a north-easterly direction across the "mudlands" into the Southampton Water for a distance of 2,200 ft. Power is giving to lay down a tramway on the pier, and run carriages there for hire.

A Limited Company, with the multifarious duties involved in its title of the "Withernsea Pier, Promenade, Gas, and General Improvement Company," is authorised to erect a pier at that rising Yorkshire watering-place 1,300 ft. long, 14 ft. wide, and 16 ft. above high-water mark. Power is also given to erect shops, saloons, bazaar, reading and refreshment rooms on the pier or its approaches,—a privilege not accorded in any of the foregoing cases.

THE COST OF ELEMENTARY SCHOOLS IN ENGLAND.

A RETURN issued by the Education Department of the expenditure from education grants for elementary schools in the year ended 31st March, 1874, shows that in that year a total sum of 1,268,773*l.* was voted for the general purposes of the Education Act. Of this total amount, 70,352*l.* was for the building and furnishing of school premises, and 114,328*l.* for the general administration of the law. The figures show an increase of 95,986*l.* over those for the year ended March 31, 1873. The total grants since the year 1839 amount to no less a sum than 14,630,678*l.*

IMPROVEMENTS IN LAWRENCE POUNTNEY HILL.

DEMOLITION OF THE OLD MERCHANT TAYLORS' SCHOOL.

THE Merchant Taylors' Company are about to make important improvements in Lawrence Pountney-hill, Suffolk-lane, and the neighbourhood, and with this view the materials of the old property in the locality have, within the last twelve months, been from time to time sold. The materials which have thus been disposed of include the old Merchant Taylors' School, standing in Lawrence Pountney-hill, Suffolk-lane, and Ducksfoot-lane, and on the site so cleared, as well as on other sites in the immediate locality, a number of new buildings are about to be erected. The width of the several approaches and streets in the locality, are, we understand, to be extended, and several other improvements are to be made, one of which is to be the ornamental character of the different elevations.

GENERAL MEETING OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE council have made public the following proceedings at the late general meeting:—

Professional Practice.—Mr. H. Dawson, Fellow, called attention to a paragraph in the report of the council, relating to a question of professional practice, and proposed a motion supporting the opinion which the council had expressed, and suggesting certain steps in reference thereto. After some discussion, during which Professor Donaldson recommended that the question should be brought before the Professional Practice Committee, Mr. Dawson amended his motion, which was passed in the following form:—

Resolved—"That this meeting heartily endorses the observations of the council in that paragraph of the report (commencing at the foot of page 7) which animadverts upon the conduct of certain architects, who appear to have tendered against each other for professional commissions."

The Architectural Examination.—Mr. T. Roger Smith, Fellow, having referred to the paragraph in the report respecting architectural examination, proposed that it should be amended in a form more favourable to the continuance of the examination. Mr. E. Nash, a late examiner, defended the paragraph, which he regarded as an incentive to future candidates. After some remarks from Mr. R. P. Spiers, Associate, it was

Resolved—"That a committee, consisting of Fellows and Associates of this Institute (as representing the examining body), be appointed to confer with the committee of the Architectural Association (as representing the body of students) on the possibility of carrying on the examination with increased success; and further, that the same committee be instructed to consider the nature of the prizes offered respectively by the two societies, with the view of preventing a repetition of the same subjects.'

BUILDERS' BENEVOLENT INSTITUTION.

AN election of five pensioners,—an unusually large number,—on the funds of this Institution, took place yesterday (Thursday), at Willis's Rooms, St. James's; Mr. George Dines, president, in the chair. The poll was opened at twelve o'clock noon. There were eight candidates,—five men and three women,—of whom three men and two women were to be elected. The candidates were:—Evan Jones, aged 66, plasterer (third application); William Stribling, aged 72, carpenter (second application); Thomas William Cranstone, aged 71, builder (second application); Thomas Benham, aged 44, blind, builder (first application); Robert M. Tilson, aged 81, bricklayer (first application); Sarah E. Bear, aged 69, widow of the late Wm. Bear, plasterer (eighth application); Jane Rumens, aged 63, widow of the late J. Rumens, builder, &c. (fifth application); and Charlotte Day, aged 68, widow of R. P. Day, late pensioner on the funds of the Institution (second application). The poll closed at three o'clock, when the scrutineers, Messrs. Matthew Hall and F. W. Keeble, announced the voting to have been as follows:—Jones, 786; Stribling, 1,387; Cranstone, 1,407; Benham, 3,135; Tilson, 2,991; Bear, 4,281; Rumens, 5,066; Day, 1,468. The chairman declared the successful candidates to be Messrs. Benham, Tilson, and Cranstone, Mrs. Bear, and Mrs. Rumens. Votes of thanks to the scrutineers, chairman, and to the secretary *pro tem.*, Mr. Thomas Stirling (who, in the words of the president, has been the life and soul of the Institution since the lamented death of Mr. Harris, the secretary), brought the proceedings to a close.

THE LEEDS EXHIBITION.

LEEDS has cause to boast of the favour of Royalty. The Town-hall, erected by the Corporation at a cost of 150,000*l.*, was opened by the Queen; the General Infirmary, built by private subscription, at an expense of over 100,000*l.*, by the Prince of Wales; the People's Park, purchased by the Town Council for 130,000*l.*, by Prince Arthur; and on the 13th instant the Duke of Edinburgh inaugurated the Yorkshire Exhibition of Arts and Manufactures, the objects of which are two: first, the encouragement of the fine arts and manufactures; and, secondly, the liquidation of a debt of 10,000*l.* left upon the Leeds Mechanics' Institution and Literary Society, connected with which are a school of science and a gallery of art. The Exhibition covers an area of an acre and a half, and is built on the site of the Coloured Cloth Hall and the land adjoining. Inside the large open space in the middle has been erected the central hall, named, in honour of the Duke, "The Edinburgh Hall." It is a structure of glass and iron, 186 ft. long, 98 ft. wide, and 75 ft. high, supported on forty pillars, with circular ribs to uphold the roof. The collection is large. The sanitary department is well supplied with disinfecting appliances, heat and ventilation producers, pipes, junctions, traps, and many articles of special interest. In the Fine Arts Gallery there is a good display of works, both ancient and modern.

A "TENDER" POET.

THE differences observable in the tenders delivered by a number of builders for the erection of Arlesey School (p. 426, *ante*) has educed a poet. We find the following figurative verses in the *Bedfordshire Express*:—

ARLESEY SCHOOL ESTIMATES.

4,937*l.*
Sharp and Maxwell's price was given,—
That is, they'd run them up towards heaven,
For four, nine, a three, and seven.

3,550*l.*
Allpress said they might be wrought,
The labour done, the timber bought,
For three, two fives, and just a nought.

3,253*l.*
Then Nightingale declared that he
Could through the architecture see
For three, two, five, and just a three.

3,244*l.*
But Boyce put down the figures lower;
He would complete from roof to floor
For thirty-two and forty-four.

3,082*l.*
At three, nought, eighty-two the score
Was written down by Mr. Moore,
Who wanted neither less nor more.

2,792*l.*
But Stapleton, the firm and true,
Believed that he the job could do
For twenty-seven, ninety-two.

2,533*l.*
And Mr. Redhouse thought that he
A little profit still could see
At twenty-five and thirty-three.

2,525*l.*
Leng said he knew he could survive
The job, and really on it thrive
For twenty-five and twenty-five.

2,320*l.*
But Mr. Dunham truly thought
The undertaking could be wrought
For twenty-three, a two, and nought.

2,585*l.*
Two, five, and eighty-five, a Saint
Upon his estimate did paint:
He thought with that he should not faint.

2,185*l.*
The modern price of wood astounds,—
Twelve-trees beyond two thousand pounds!
These trees were grown on English grounds.

1,925*l.*
But King declared that he would plod,
And finish them with saw and hod
For nineteen and for twenty odd.
This statement made rate-payers sing,
And, as none could a lower bring,
They gave the job unto the King.

Arlesey Asylum. LUNO.

GLASGOW PUBLIC HALLS.

IT has now been finally arranged that the memorial-stone of the new Glasgow Public Halls, the plans for which were described in the columns of the *Builder* some months since, will be laid with Masonic honours on (this) Saturday, the 22nd inst., by Colonel W. M. Neilson, Provincial Grand Master. The ceremony, and preceding procession, it is anticipated, will be of an imposing character. The scheme, it may be added, is in the hands of a company with a capital of 80,000*l.*, in shares of 10*l.* each, and of which sum 73,000*l.* have been already subscribed. The inadequacy of the existing accommodation in the city having very forcibly impressed itself on the public mind during the past few years, led to the promotion of the company with the object of building public halls, which, whilst they met a long-felt want, should be an ornament and credit to the city. The present suite of Assembly-rooms, now in course of erection, has frontages towards Berkeley-street, Kent-road, and Granville-street, the principal entrance being from the latter. The great hall occupies the entire area of the most easterly portion of the building, and its dimensions are about 185 ft. in length, 75 ft. wide, and from floor to ceiling 56 ft. It will afford one half more accommodation than any other public hall in the city. The orchestra-platform at the south end will accommodate 100 performers, whilst the chorus gallery will allow of the location of 550 singers. Space is being reserved for the erection of a grand organ, plans for which are being prepared by Sir Henry Smart and Mr. Best, of St. George's Hall, Liverpool, so that in every respect the new Assembly-room will compare favourably with the City-hall. The plans embrace two halls of smaller dimensions, with reception and retiring rooms, a ball-room, supper-room, and every requisite convenience. When completed the new halls will form an important addition to the now numerous architectural ornaments of the city. Satisfactory progress has already been made with the work, and it is expected that the large hall will be ready for the roof by July next. Should no unforeseen circumstance intervene the directors hope to have the whole building completed towards the end of next year, in time for the triennial musical festival, and the meeting of the British Association, which is appointed to be held in Glasgow in 1876. The plans of the Public Halls, we may remind our readers, were prepared by the late Mr. Cunninghame, of Liverpool, and Mr. Campbell Douglas, of this city.

THEATRICAL.

MR. HOLLINGSHEAD has made arrangements with M. Coulon for a short season of Comic Opera in French, and already "Les Mousquetaires de la Reine" and "La Dame Blanche" have been given, while Auber's sparkling work, "Les Diamans de la Couronne," stands on the bills for this, Friday, evening, the 21st. Some of the critics appear a little at sea as to the acquaintance with French opera enjoyed by London. "Les Mousquetaires" was given at Drury-lane many years ago, and was afterwards done by Mr. J. R. Planché, and produced as a drama in 1846, with the title of "Queen Mary's Bower." The "Pré aux Clercs" was done twice by him, first as "The Court Masque," without music; secondly as "The Challenge," when the music also was given, so that they are not new to London, as some would have us believe. In "Les Mousquetaires de la Reine" M. Herbert and M. Barbet are both very good, and Mdme. Naddie is an elegant woman, with a sympathetic voice. The *ensemble* is very agreeable. "La Dame Blanche" presents an entire change of singers, but is scarcely so well done on the whole. The play-going part of the public owe many thanks to Mr. Hollingshead for the variety which he continuously provides at his well-managed theatre.——On the occasion of Mr. Creswick's benefit last week at the Surrey, Miss Helen Ashton made a very promising *début* as *Desdemona*, and did best where most was needed. Nature has been kind to Miss Ashton, and she is evidently determined to spare no pains herself to insure success in the profession she has chosen.

THE PICCADILLY FRONT OF ST. JAMES'S HALL.

THE new elevation in Piccadilly to St. James's Hall, which has for some time been in course of erection, is now fast approaching completion. It is 70 ft. in height from the street level, and consists of the ground floor and three stories above. The style of architecture adopted is Venetian Gothic. The materials used are red brick, with Dumfries stone freely introduced for dressings and ornamentation, and red terra-cotta is also a prominent feature in the elevation, which is further enriched by the introduction of mosaics on a gold ground. This portion of the work has been executed by Mr. Alexander Gibbs. A spacious entrance-hall leads into a vestibule, and thence to a new buffet and grill-room. The new building also contains two large dining-rooms and other offices; and from the new entrance access is also had to the Regent-street frontage, and to the large and small halls. The architect is Mr. Emden, and the contractors are Messrs. Lucas, Brothers. The decorations are under the direction of Messrs. Jackson & Graham.

The Liverpool Custom-house.—A careful examination is now being made of the dome of the Liverpool Custom-house, a portion of the cave of which, upwards of half a ton in weight, fell from its position recently. Scaffolding has been erected at the side where the stone fell. Two reasons have been assigned for the accident; first, that the stone, a soft sandstone, is being affected by the weather, and secondly that the whole structure is settling on its foundation.

CHURCH WARMING.

THE large church of St. Mary Redcliff, Bristol, has been recently warmed by Mr. Vincent Skinner, of Stoke's Croft, Bristol, who planned and erected a hot-water apparatus, under the supervision of the architect, which has proved very effective. Although nearly the whole of the pipes are above the floor, there is nothing to offend the eye. The apparatus consists chiefly of eighteen pedestals and coils of pipes in various parts of the building, so as to give a uniform temperature over all the large area. The church, moreover, is of unusual height. The apparatus contains 4,200 ft. of pipe, through which the water is constantly circulating. The chief leading pipes are beneath the floor of the side aisles, and covered with ornamental iron grating. The main source of heat is of course the boiler, which is on the upright tubular principle. The furnace bars are also hollow, through which water has to circulate. There is a second boiler, which the architect thought advisable in case of accident. These boilers are erected on the north side of the church, and sunk beneath the ground line. Mr. Skinner seems to have done his work very well.

THE PEOPLE'S CAFÉ.

THE foundation of the People's Café Company has led to the opening of a second establishment, in Whitechapel. It is bright and cheerful within, and well ventilated. On the ground floor is a good-sized coffee-room, well supplied with little marble-topped tables, and upstairs are a reading-room, where also is to be collected a small library, a room where chess, draughts, dominoes, and the like may be played; a room for billiards and also for bagatelle. At present these two latter rooms can only be used at a certain tariff, as at a club, for the necessary licence was not applied for till after Lady-day, and the Legislature has ordained that on that day only can such a licence be issued. Below, on the basement, is a room which is to be fitted up as an American bowling alley. The tariff throughout is moderate. A very reasonable and sufficient dinner, far better in all probability than many men get now at a far higher price,—a plate of meat, bread, potatoes, and pudding,—may be had for the sum of 6d., a cup of coffee or tea for 1d., a basin of soup for 2d., and for the same sum a rasher of bacon. Other charges are in a like proportion, and in certain rooms it is permitted to smoke at will. The building, it should be said, which was intrusted to Mr. George Williams, of Buckingham-street, Strand, as architect, cost, together with the purchase of the land,—for this, as in the other in Whitecross-street, is a freehold,—about 4,000*l.* At present about 10,000*l.* have been raised, and a small balance is still remaining out of this. We shall look with interest to the progress of the undertaking.

DRAINAGE WORKS.

ACTION FOR DAMAGES AND TRESPASS.

IN the Brighton County Court (before Judge Furner), held on Friday, the 7th inst., an action was heard in which the plaintiff, Mr. Moyle, a barrister, of 1, Mitre-court Buildings, London, sued defendant, Captain Spillar, a gentleman residing at 64, Lansdowne-place, Brighton, for the sum of 16*l.* 2*s.* 6*d.* Mr. Braunfeld, of London, instructed by Mr. Shaft, appeared for plaintiff; and Mr. Lamb defended.

Mr. Braunfeld, in opening the case, said plaintiff was lessee of 62, Lansdowne-place, Hove, Brighton, defendant occupying the adjoining house, No. 64, and the claim of 16*l.* 2*s.* 6*d.* was for expenses, 10*l.* 17*s.* 6*d.* which plaintiff had been put to in removing a nuisance created by defendant on plaintiff's premises, and for making his "party wall" safe; and 5*l.* 5*s.* as damages for trespass. Plaintiff declared that until the damages committed by defendant took place, his house, No. 62, was perfect in its sanitary state.

Mr. J. King, sanitary inspector of Hove, deposed that a notice requiring the draining of 64, Lansdowne-place, into the common sewer, was served on defendant by him, and that some time afterwards a similar notice referring to 62, Lansdowne-place, was served on plaintiff. The notice served on defendant had not been complied with.

Mr. Arthur Loader, architect, testified that in 1872 he surveyed and examined No. 62, Lansdowne-place for plaintiff, and found that its sanitary arrangements were perfect and connected with the main sewer, that in January of the present year he again examined the premises and found a stoppage, as shown by a plan produced, and a nuisance by reason of defendant having made a connexion from No. 64 on to plaintiff's drain by going under the party-wall of the two houses, instead of going direct into the main sewer, and thus also committing a trespass on plaintiff's premises. He found that plaintiff's pipes had been broken, and the syphon turned on one side so as to be useless as a trap, and thus sewer gases were admitted into plaintiff's house. Plaintiff's party-wall was left in an insecure state, and the vaults injured. Mr. Newnham, builder, employed by last witness to remedy the defects and make secure, corroborated. The defence was that the sanitary authorities had ordered to be done what was done, and that there was a joint cesspool.

His honour suggested a reference, being afraid that his decision would not be final, as the trespass was a continual one, being still going on. After some discussion, the judge found a verdict for the plaintiff, the amount of damages to be assessed by a competent surveyor to be chosen.

IMPROVED CAB SERVICE IN THE METROPOLIS.

A NEW company, called the Victoria Cab Company, has just been formed for introducing into the metropolis the vehicle known as the "Victoria," which has for some time been in use in Paris and other Continental capitals, and which is said to be a great improvement upon the cabs now in use in London. The capital of the proposed company is 125,100*l.*, in shares of 5*l.* each. We understand that a contract has been entered into with Mr. W. Cressey Hall, of Park-lane, to supply the company with 500 Victorias, 1,100 horses, and the requisite harness, and stable implements, for the sum of 110,000*l.* The fares are to be charged at the usual rate of cabs now in use.

TRADE MOVEMENTS.

Penrith.—The journeymen joiners of Penrith have given notice of their intention to apply for an advance of ½d. per hour upon their present pay, the advance to date from May 31st next. They are at present receiving 6d. per hour.

Kendal.—Some of the plasterers of Kendal are out on strike for an advance of 3*s.* per week.

Wilmslow.—There has recently been a dispute pending between the operative painters of Alderley Edge and Wilmslow, with reference to the rate of wages. On January 29th last, a notice was sent to the masters of the Amalgamated Society giving three months' notice of an application for an advance of wages from 6½d. to 7d. per hour, that being represented as the average rate paid at Macclesfield and elsewhere, the advanced rate to become due on the last Saturday in April. Several meetings of the masters and men took place; but as the advanced rate was not forthcoming the men left work on May 1st. Afterwards, however, a meeting of the masters and men took place, at which it was agreed to refer the matter in dispute to two gentlemen in the neighbourhood (Mr. S. Thorp and Mr. Smithson), each party binding themselves to abide by the decision of the arbitrators, and meanwhile the men resumed work. Their award, dated the 6th inst., has been given, their decision being that the men are entitled to the advance sought.

VENTILATION OF DWELLING-HOUSES.

As ventilation of dwelling-houses is still so much neglected, will you allow me to give you my experience of a system which will answer the purpose, and can be applied to old and new houses?

Treat the hall and staircase as the conduit for the supply of fresh air to the whole of the rooms. During the day this will be effected by the constant opening of the outer doors. At night-time the trap-door in the ceiling of the topmost landing must be raised 12 in.; or some other means, such as lowering the sash on the landing, must be adopted to admit fresh air.

Over every door leading into the rooms insert two air-gratings—the larger the better; that outside the room near the head of the door; that inside the room close up to underside of cornice or ceiling. Into the flue of each room over the fireplace, near the ceiling, insert a large size Boyle's ventilator, and always keep open the register-doors over the stoves in the bedrooms. By these means the products of the gaslights and of the human breath are carried off, and a constant change of air takes place without draughts being felt. W. S. HORNER.

HOUSES FOR THE MIDDLE CLASSES.

SIR,—Having just seen the letter of your correspondent "C. J. D.," in the *Builder* of May 1, I write to say that his suggestion has already been carried out. The experiment has been made, and has met with the success which your correspondent anticipates,—the best thanks of all who participate in its benefits. Its very success has kept it from being known as it deserves to be known, as the houses are let before they are finished. They are "not exactly like barracks." On the contrary, they are as elegant as they are convenient. When the next block of eight dwellings is finished, there will be accommodation for fifty families, renting flats from 60*l.* to 20*l.* The extensive and beautiful gardens are held in common. The experiment is wholly due to the enterprise and genius of the originator of the Industrial Dwellings, Mr. Matthew Allen. The estate, where the work is still in progress, is situated in the Manor-road, Stamford-hill, and will repay a visit.

I. C. K.

ANTS IN DWELLING-HOUSES.

SIR,—An army of red ants has suddenly invaded the house of a friend of mine in the country; it is a detached building, though closely abutting on another; it has no underground rooms, but only extensive cellarage, into which the enemy does not seem to have penetrated as yet, being at present content with working his way into the commissariat department, which he plunders almost at will, in spite of every effort in the shape of boiling water, &c., to destroy him. If you or any of your subscribers can suggest a remedy, I should be most thankful. J. D.

LANDLORD'S OR TENANT'S PROPERTY?

COPPE *v.* FAULKNER.

IN the County Court of Congleton, on the 4th inst., a case of disputed ownership of property renewed by a tenant, was tried. The plaintiff, T. S. Coppe, was tenant of a house in Moody-street, Congleton, one of the most ancient in the town. In the year 1860 plaintiff wanted the oven with grate renewing, and he bought one, but the house being sold the plaintiff had to remove from there last Christmas, but having received a legal notice from Mr. Wilson not to remove the oven and grate, and other things, he did not do so. Cross-examined: he had lived in the house since 1825, and in the year 1860 he took the old oven and grate out and bought another. The oven and grate had been put up by auction. The executors of the late J. Faulkner had made a counter claim.

The Judge said the plaintiff was bound to remove the articles in question before his tenancy came to an end.

Plaintiff said he should have removed them only for the legal notice.

The Judge said the oven and grate ceased to be the property of the plaintiff after the termination of the tenancy, and became the property of the landlord.

Verdict for the defendants.

ARCHITECTS' ACTIONS.

LUNAN *v.* HALLIDAY.

THE plaintiff in this action, at the Durham County Court, before Mr. E. J. Meynell, is an architect, of Silksworth, Sunderland, and sought to recover the sum of 14*l.* 17*s.*, for preparing plans and specifications for a public-house, proposed to be erected for the defendant, one Mrs. Halliday, at Nettlesworth.

Mr. Lunan stated that Mrs. Halliday instructed him to prepare the plans in question, and having submitted them to the defendant, she said she had received tenders, and asked witness what his estimate of the cost of the building was, and he replied 907*l.* The defendant said it was to be completed before August, otherwise she would not be able to get a licence for the house. His charge was 1½ per cent. on the 907*l.* The building, however, was not proceeded with, and then Mrs. Halliday's son offered him 5*l.* for his trouble.

By Mr. Granger.—Witness has been seventeen years an architect, and is not a contractor.

Mr. Granger.—What in law or custom constitutes an architect?

Mr. Lunan.—A man capable of drawing plans, making specifications, and experience in building. The house had to be completed on the 12th of August. It was no fault of witness's that it was not done in August. Witness had not to find any of the material. 1½ per cent. was the usual charge on buildings for which plans were prepared and the buildings not completed. He did not remember the defendant saying that she did not want the house to cost more than 600*l.* or 700*l.* It is the custom to charge 2½ per cent. if the work is not completed.

Mr. W. J. Cordner contractor o Silksworth, and Mr

John Campbell, architect and surveyor, of Seaham Harbour, each stated that the usual commission was 5 per cent., and half that in the event of the work not being carried out.

The Judge (to Mr. Campbell).—Supposing no tender is accepted?

Witness.—In that event the lowest tender might fairly be assumed to be the value of the house. He and Mr. Cordner considered the claim of the plaintiff was very reasonable.

Mr. Campbell (in answer to the Judge) said, that in case he received instructions to prepare plans and specifications for a house to cost 500*l.*, and the house cost 1,000*l.*, he would not expect to be paid on the 1,000*l.*

Mr. Granger.—That is the very point of the case. My client expected the house would cost no more than 600*l.* or 700*l.*, and she told the architect the building was to cost no more; but when the tenders were received it was found the cost would be 1,000*l.*, and in consequence the project was abandoned. The plaintiff had been offered 5*l.*, an offer which he asked the Court to consider in its judgment.

Mrs. Ann Halliday deposed that she told the architect that the house was not to cost more than 500*l.* or 700*l.* In consequence of the high nature of the tender, the project of building the house was for the time abandoned. She was building a public-house now, which was to cost 661*l.*, and the architect was Mr. Joseph Wilson. The house now being built was to have the same number of rooms as the house designed by the plaintiff. She never suggested any alteration in Mr. Lunan's plan. Did not give the plaintiff any information as to the size of the room; the whole thing was left to himself. A builder named Richardson offered to build the house for 850*l.*

Mr. Joseph Wilson, architect, said he was now building the defendant a house that was to cost 661*l.* 10*s.*

The Judge.—Now, Mr. Wilson, if you were asked to build a house for 700*l.*, and you sent in a plan costing 900*l.*, would you expect to be paid on the higher amount?

Mr. Wilson.—Certainly not: it would be a professional error. I should expect to have to alter the plan. Five per cent. is the usual charge, and if the work is not proceeded with 2½ per cent.

The Judge said he considered the plaintiff was entitled to 1½ per cent. on 700*l.*, and gave judgment for 10*l.* 10*s.* and full costs, the latter swelling the amount to a sum far exceeding the plaintiff's original claim.

MORTAR UNDER THE METROPOLITAN BUILDING ACT.

SIR,—It must be obvious to every one who knows anything of the case referred to in your last number that it is exaggerated.* To those who know nothing of the case the impression is given that the whole building was condemned, whereas the only portion ordered to be taken down was less than a quarter of a rod, the greater part of the building having been built of pure pit-sand and lime.

A. B.

AGREEMENTS BETWEEN MASTERS AND MEN.

A CASE decided on Monday at the Durham Police Court is one deserving more than a passing notice by builders and their men.

A few weeks back a great number of joiners in the employ of Messrs. Robson & Son, builders, of the City of Durham, sent the following notice to the firm:—"To Messrs. Robson & Son.—Sirs: Notice is hereby given, that at a general meeting of the joiners in this city, it was unanimously agreed that on and after the 24th day of April the working hours be fifty per week, and that the time be paid at the rate of 8½d. per hour. Signed on behalf of the committee, William Jopling, John Crawford."

The builders not complying with the terms of the joiners, the men in a body left without giving further notice. Two of the men, John Redshaw and Robert Flint, were summoned as defendants, under the Master and Servant Act, for leaving Messrs. Robson's service without giving a week's notice, and compensation was claimed for five days, at 5*s.* per day. The rule relied on was, "One week's notice shall be given before a workman leaves his employers, and before a master discharges a man."

Mr. Henry Robson said the defendants were engaged from week to week, and were perfectly aware of the rules of the shop, and had always recognised them. Five shillings a day compensation is not only a reasonable but a nominal sum. It was much less than the loss the firm were suffering, and the defendant, John Redshaw, by leaving his work without notice, had caused the greatest inconvenience. His place was standing idle; work he was employed to do had not been done,—it remained undone to the present day, and witness was being pressed to have it done. The rules that bear date April 2, 1867, hung in a conspicuous place in the workshop. There had been no new rules since, but the pay per hour had increased from 5½d. to 7d. per hour. Had never been asked to alter the rules. When they had been asked for an advance of wage in a reasonable manner they generally agreed with the men. A workman was never discharged without a week's notice except for misconduct.

Alderman Robert Robson said he was senior member of the firm. On the Friday following the receipt of the notice from the men, he requested the joiners to meet him in his office. They came in a body, and considerable argument and discussion ensued; in the course of which he pointed out the unreasonableness of their demand, and that it would entail a loss of 200*l.* or 300*l.* on his contracts. He offered to increase the wage to 8*d.* per hour, which the whole of the men, two or three excepted, were willing to accept. They said it was a liberal offer, and one they ought to accept. On the 26th, Redshaw went for his tools, and witness had some conversation with him and three other joiners. He told them if they took their tools away he would summon them, as they were bound to give a week's notice. They then left their tools and went away. They never repudiated the rules. Next morning he was going into his office about half-past nine, when he saw Redshaw coming out with his tools. He told him he would summon him under the Master and Servant Act.

By Mr. Brignal.—Witness did not consent to alter the hours from 53 to 50 per week, but promised to give 8*d.* per hour.

The defence set up was that the men were engaged and paid by the hour, and could either be discharged or leave at the end of any hour, and they further denied all knowledge of the rules. On the point of law, a case from Addison's "Defeasable Contracts," was relied on. "If a labourer is employed to dig potatoes at so much an acre, or to cut turf at so much a load, or to make excavations of earth-work at so much per cubic foot, the employer may, if there is no determinate term of employment, dispense at any time with the future services of the workman, paying him for the work actually done." The London custom was also cited, and George Newman, joiner, said he was a London man, and was engaged by Mr. Robson through an advertisement that appeared in the *Labour News*. He started work on the 27th of August last, with a friend, and Mr. Robson, on their entering his office, paid them their railway fares from London, and said he did not agree to do so if they were only going to stay a week or so. He drew up an agreement for three months, which they signed. They had worked for Mr. Robson ever since. When the three months' agreement had expired, he and his mate from London did not engage under the rules mentioned to give a week's notice. He always understood they could be discharged at a moment's notice, and that he could leave at a moment's notice. That was the London custom, but it was not carried out in all cases. Did not think the joiners came under the Master and Servant Act. Is a member of the Amalgamated Society of Joiners and Carpenters.

The Mayor said that the Bench were unanimous that the case was clearly proved with respect to the defendants leaving the service without any notice at all, and that they were bound by the rules to give a week's notice. The sentence of the court was that they should each pay the compensation claimed by their masters, and the costs of the prosecutions, to be levied by distress, or in default seven days' imprisonment.

Acting on the advice of their solicitors, some fifty men on strike returned to their work in order to give the week's notice, and then the builders will be in the same position as before. If men and masters signed duplicate copies of agreements or rules, much ill feeling and litigation would be avoided.

CHURCH BUILDING NEWS.

King's Lynn.—The Free Christian church, which was opened here on the 8th ult., has been built on a site in Broad-street, and is of the fourteenth-century Gothic style. The front is faced with white bricks, relieved by red brick bands and Bath-stone dressings to doors and windows. The church internally is 57 ft. long by 27 ft. wide, and 24 ft. in height, and is entered from a narthex; it is seated for 160 persons, with open benches, having pitch-pine ends stained and varnished. The roof is partly open, the tie-beams being below the ceiling, with cut and pierced spandrels, pendants, and stone corbels. The window-heads are filled with stained glass, by Messrs. Farmiloe & Son, of London; gas standards, by Messrs. Skidmore, of Coventry. The total cost, including site, &c., has been 1,250*l.* Messrs. Adams & Son, of King's Lynn and Wisbech, are the architects; and Mr. John Leach, the builder.

Bradwell.—This church, which has been closed for the past few months for the purpose of restoration, has been re-opened by the Lord Bishop of the diocese. New windows have been inserted in the east ends of the aisles, carefully worked out according to the original design, as indicated by fragments of stonework remaining. The walls internally have been repaired and coloured, and new window and floor put to the tower. The work has been satisfactorily carried out by Mr. Robinson Cornish, of North Walsham, from the designs and under the superintendence of Mr. J. T. Bottle, architect, Great Yarmouth and London. The expenditure at present has been about 750*l.*, but in order to complete the restoration of the whole fabric, at least an equal additional sum will be required.

Whitegate.—This church, after having been restored, has been re-opened. The old church was erected in 1726. Externally it was a plain brick building. Internally, it was divided into nave and side aisles by means of wooden pillars, which, with the roof timbers, remain in the new building. The design of the new work is of a late Gothic character, and has been carried out by Mr. R. Beckett, of Hartford, from the plans and under the superintendence of Mr. J. Douglas, architect, of Chester. New mullioned and traceried windows of stone have been inserted in the side walls of the body of the church; the old parapet walls have been removed, and projecting eaves, with a cove formed of cement underneath, provided instead. As much as possible of the old walling, which was of bricks of a small size, has been re-used. On the south side there is a new porch, of oak. The entrance from this into the church is the old doorway. Adjoining this at the west end, is the new vestry. The tower has been pulled down to about 3 ft. above the ridge of the main roof, and is surmounted by a spire constructed of wood, and covered with oak shingles, terminated by a gilt weathercock. New windows have been inserted above the belfry floor, and at the west end an arched two-light traceried window is put in, showing in the interior of the church. The chancel, which is considerably longer than the old one, is altogether new. At the east end is a five-light window, and two lights of similar design are placed at the sides. The gable of the east end, above the chancel window, is constructed of oak filled in with nogging work, the upright pieces being panelled and traceried, and the beams and verge-boards carved. The old pews have been replaced by open benches of light wood stained and varnished. Nearly one-half of the seats are free. The chancel fittings and the new chancel arch are of oak. The windows are glazed with cathedral-tinted glass. The expenditure has been about 1,600*l.*

Miscellanea.

Newcastle Society of Antiquaries.—The monthly meeting of the Society of Antiquaries was held on the 5th inst. in the Old Castle, Mr. Robinson (Houghton-le-Spring) in the chair. The Rev. Dr. Bruce exhibited a copy of his work on the Roman Wall, bound in two volumes, and the boards in which they are bound consist of oak used in the construction of the Roman bridge over the Tyne at Newcastle, built by Hadrian, A.D. 120, maps, &c., forming a third volume, and the boards are also formed of oak. Dr. Bruce laid before the meeting a complete copy of the *Lapidarium* and said: "I have the happiness to lay upon the table a complete copy of the *Lapidarium Septentrionale*. This is to me a matter of personal satisfaction, for a work of such magnitude, and requiring so long a time to produce, it would have been nothing surprising if I had been cut off before finishing it." The chairman said they could not adequately express the thanks of the Society, and also of the public of the North of England, to Dr. Bruce for the great work he had laid before them. A discussion took place with reference to the publishing of the book, and it was agreed to sell copies of it at 7*l.* 7*s.* each. There have been only 250 copies of this valuable work printed, and there are only a small number for public sale. The volume has cost the Society upwards of 1,000*l.*, and maps, engravings, &c., have been given by noblemen and gentlemen to the value of considerably above another 1,000*l.*

Labourers' Cottages.—A Bill has been prepared and introduced into the House of Commons by Mr. Morley, Mr. Whitwell, and Mr. Stanhope to enable the Public Works Loan Commissioners to make advances to the limited owners of entailed estates and other landowners for the building, rebuilding, and improvement of labourers' cottages repayable by a rent-charge upon the inheritance, and to amend the Improvement of Land Act, 1864. When any limited owner of an entailed estate, or other landowner, as defined in the eighth section of the original Act, is desirous of borrowing money for the building, rebuilding, or improvement of labourers' cottages only, he shall make an application to the Commissioners to sanction the same. If the Commissioners should think fit to entertain the application, they may cause the farms, lands, and cottages to be inspected and reported upon, in order that they may be satisfied of the propriety of sanctioning the application. The Commissioners may require modifications to be made in the plans, &c., and they will have power to give them their sanction by a provisional order. Upon such order the Public Works Loan Commissioners may advance the loan applied for, and on the completion of the buildings the Commissioners are to execute a charge upon the inheritance.

Huyton Sewerage.—A meeting of ratepayers of Huyton-cum-Roby, called by the overseers of the poor, was held at the Queen's Arms, Huyton, for the purpose of nominating members to serve on the parochial committee, and to discuss the sewerage scheme proposed by Mr. T. M. Reade, C.E. There was a moderate attendance. Mr. W. Swift having pointed out that Mr. Reade's plan appeared to him to be insufficient for the requirements of the district, proposed that it be a recommendation to the committee to advertise that premiums of 100*l.*, 50*l.*, and 25*l.* would be given for the three best designs. Mr. Miller seconded the proposal, which was agreed to.

* This is by no means obvious to us.

Stevenage Sewerage.—The plan which has been adopted by the Board here is that known as the "separate system" of sewerage and drainage, *i.e.*, a network of impervious pipe sewers for the transmission of the sewage only; the storm and surface waters being conveyed into the watercourse by the old drain sewers, which serve well enough for such purpose. The sewers are ventilated by numerous open gratings at the surface of the streets, allowing of a constant circulation of air in the sewers and preventing gases, if generated, from taking a concentrated form. The flushing is provided for by placing tanks at the heads of sewers, which collect the rainfall falling on a portion of the road surface; the sewers are, however, to a certain extent independent of this arrangement, being designed of such sizes and with such gradients as will render them, it is expected, self-cleansing. The sewage will be conveyed by gravitation to a plot of land about half a mile south of the town, utilised and purified by downward filtration. The estimated cost of the works, including those on the land, is something under 3,000*l*. Messrs. Smith & Austin are the engineers.

The Manchester Industrial Exhibition. On the 14th inst., the Manchester Industrial Exhibition for the year 1875, established by the Society for the Promotion of Scientific Industry, was formally opened in a building specially erected near the junction of Cheetham Hill-road and Queen's-road. The success which attended last year's show in Peel Park was very great, and the interest manifested by thousands of spectators in the various appliances for economising labour of all kinds was such that it was apparent equal patronage would be bestowed on these exhibitions if made annual. The exhibition building in Cheetham Hill-road lies alongside the new Wesleyan Chapel. It is 310 ft. in length, 100 ft. wide, and some 40 ft. in height from the centre of the roof. It is built entirely of timber, on the principle adopted at the Peel Park show. The novelties of the exhibition comprise a large iron tank at the lower end of the hall which will be filled with water, and three times a day a professional diver will descend and show the process of stone-setting under water.

The Proposed Municipal Buildings, Newbury.—A special meeting of the Town Council was held on the 11th inst., to afford the members an opportunity of expressing their opinions on the seven sets of plans sent in for the new municipal buildings which it is proposed to erect between the Town-hall and the premises of Messrs. Jackson & Son, at a cost not exceeding 3,500*l*. (inclusive of the sum of 1,000*l*. to be contributed by the Court of Quarter Sessions). The plans provide for better means of ingress and egress at the Town-hall, and they also embrace sketches for a suggested new Town-hall, but it is generally felt that such a large undertaking as the latter would involve a greater outlay than the Council would be justified in incurring, at least at present. We have heard that two plans were selected, and that after they have been submitted to the inspection of Mr. Morris, the county surveyor, the Council will make a final selection.

The Railway Transit to the Alexandra Palace.—We recently mentioned our experience of the railway facilities for reaching the Alexandra Palace on the opening day. Difficult and disappointing as that was, we had hoped that the Great Northern Railway Company would not allow a second opportunity to occur without improvement. But this proved to be worse than the first, and thus a bad impression was created as to the means of supplying proper conveyance, which, for so short a distance, ought to be without the slightest difficulty or discomfort. We know of passengers who were detained hours on the line on Whitmonday, and at last were compelled to walk part of the journey, not reaching their homes in Camden-town till two in the morning. The system, too, of issuing first-class tickets to those who think to get relief from overcrowding on this line, as on the railways generally, is deceptive, for no distinction of class, or the paid-for protection implied, seems to be thought of on the platform.

The Drainage of Slough.—At the meeting of the Urban Sanitary Authority last week, the surveyor reported that the cesspool made to receive the drainage from the east end of the town was full to overflowing, that the outlet was insufficient to take away the superfluous sewage, and that the damage done to the occupier's crop is very considerable. He had obtained leave for disinfecting the ditches near Upton Park.

A Refractory Grindstone.—Last week a large grindstone was fitted up in the works of the Messrs. Feetham, engineers, Soho-square. It was placed upon a spindle, and having been properly centred, was set agoing by steam power at half speed. It had been in motion for only a few minutes when a loud explosion shook the building, and a mass of stone weighing about 10 cwt., the entire weight of the stone being somewhat over 31 cwt., was sent right through the flooring of the workshop above in which several fitters were engaged and descended within [2 in. of the] shaft that drove the entire machinery. Had the grindstone been put at full speed the immense mass of stone would certainly have penetrated the three upper floors, all of which were crowded at the time. The stone was carefully inspected before being put in position, but no flaw was observable.

Death of a Good Copyist.—Illuminative art has lost one of its most skilful exponents of the late Mr. C. W. Wing, known during the last thirty years at the British Museum, as the "best facsimile copyist" of ancient illuminations. Among other valuable work he contributed to the books of Mr. Noel Humphreys and Timbs. Under the late Sir A. Panizzi he assisted in the catalogue work of the British Museum. In 1851 he made drawings on wood from the Great Exhibition for the *Illustrated London News*. For the Exhibition of 1862, he executed drawings for publication by Messrs. Day & Son; and in 1870 Mr. Wing was employed on work for the South Kensington Museum.

Claim by a Labourer for Personal Injuries.—In the case, Cassim *v.* Greenfield, held at the Court of Passage, Liverpool, the plaintiff, John Cassim, a bricklayer's labourer, claimed from Philip Greenfield, a builder and contractor, damages for injuries in consequence of the defendant's negligence. There was no defence to the action. In July last the plaintiff was engaged by the defendant to assist in taking down an old house in the Old Haymarket. He was, under the defendant's direction, removing a quantity of stone from the footway, when part of a wall was thrown down by the defendant, and a part of the *débris* fell upon the plaintiff and seriously damaged his hand. Verdict for the plaintiff for 150*l*.

Child Labour in Brick-yards. — At the West Bromwich Police-court, before Mr. I. Spooner (stipendiary), John Davies, brickmaker, of Greet's Green, was summoned at the instance of Mr. Blenkinsopp, the inspector of factories of the district, for employing four girls under the age of sixteen years to make bricks. The defendant pleaded that he did not employ the girls himself; and that, therefore, he was not the responsible person. The Stipendiary informed the defendant that by the wording of the Act of Parliament he was clearly responsible for the infringement of it, and fined him 1*l*. and costs in each case, altogether 5*l*. 18s.

Fall of a Chimney near Oldham.—On the 9th inst., a chimney at the mill of Messrs. Clegg & Sons, of Shaw, near Oldham, fell with a loud crash. The chimney was 72 yards high. Considerable damage was done to property adjacent. The chimney had only been built about seven months, but for some time symptoms of the foundation giving way had shown themselves. The chimney had been built on the site of an old water lodge. The structure gave way near the base, and bricks were projected in every direction within a radius of 100 yards.

The Roman Remains at South Shields. On the 12th inst. the labourers of the committee entrusted with the excavations of the Lawe, South Shields, in search of Roman remains, were rewarded by an interesting discovery. During the past few days the committee have been prosecuting their search in a northerly direction from the forum, and some distance from the forum the workmen on Wednesday came upon a building some feet below the ground, which appears to have been used by the Romans as a treasury. The building is not of large dimensions, but is built of strong ashlar blocks, and is bound with iron bars.

Lucky they were there!—A newspaper says,—"Two architects, bearing a well-known name, were on board the Bessemer on her trial trip, and glancing at the havoc made by the steamer amongst the timbers of the Calais pier, mentally assessed the damage done, the one at 300*l*., the other at 500*l*. But the Calais municipality claims 2,800*l*."

The Statue of the Late Lord Mayo.—On the 14th inst., at the foundry of Messrs. Cox & Son, at Thames Ditton, the final casting of the colossal equestrian statue of the late Lord Mayo was made. When completed the statue is intended to be erected at Calcutta, and it is hoped that it may be unveiled during the time of the visit of the Prince of Wales. The design comes from the studio of Mr. Thorneycroft, and the figure is that of a general officer in action. The statue, when completed, will weigh rather more than four tons, and will be about 14 ft. in height.

The Metropolitan Gas Companies Bill.—In the House of Commons last week, Sir J. Hogg moved the second reading of this Bill, which proposes to fix the maximum price of gas at 3s. 9d. per 1,000, under the penalty of a reduced dividend, and the illuminating power of sixteen candles. He proposed that after the second reading the Bill should be referred to a Select Committee. After considerable discussion the Bill was read a second time.

Enlargement of the Malpas Gas Works. The gas works being, through the increased demand for gas, too small to supply the wants of the town, it has been decided by the shareholders to enlarge the same by erecting a new gasometer, &c., and last week the tenders for the work to be done were opened, when the following were put in:—Skoins, London, 958*l*.; Willey & Ford, Exeter, 904*l*.; Holmes, Huddersfield, 832*l*.; Porter, London, 745*l*.; Poole, Dawley, 713*l*. 10s.

Loan Collection of Scientific Apparatus. A meeting of the Committee for organising the Loan Collection of Scientific Apparatus was held at the Science Schools, South Kensington Museum, on the 12th inst. It was decided to postpone the opening of the Exhibition until March, 1876. The schemes defining the limits of the Exhibition in the various branches of science, as prepared by the subcommittees, were considered, and it was resolved to refer them to a general subcommittee for revision.

The Proposed Bridges over the Medway. Following the example of the inhabitants of Snodland and Burham, the people of Wouldham assembled in large numbers in the National School on the 11th inst., to pass resolutions in favour of asking the Rochester Bridge Wardens to aid them in the construction of improved bridge accommodation across the Medway. The chair was taken by the rector (the Rev. C. G. Andrewes). Various resolutions to carry out these views were agreed to.

Cardiff.—The surveyor to the local board of health has reported favourably as to the results of the trial of Mr. Geo. Jennings's patent "convenience," and advises its adoption in other parts of the town at an expenditure of 300*l*. This would lessen the consumption of water to an extent that would only require an expenditure of 27*l*. a year instead of 147*l*. Upon the proposition of Mr. Winstone, it was unanimously agreed that the patent should be adopted in every instance.

Memorial of the Late Canon Gilbert.—It has been decided by the clergy and laity that a memorial shall be raised to commemorate the services rendered by the late Rev. George Gilbert to the church in the diocese of Lincoln. The memorial will take the form of a stained-glass window to be placed in the chapter-house of Lincoln Cathedral. The window will form part of a series of windows illustrating scenes from the history of the cathedral.

New Parochial Buildings, Kingswinford. The new Board-room and offices in connexion with the workhouse, which have been erected from the designs of Mr. Smallman Smith, of Stourbridge, are now completed. Externally the buildings are of brick with stone dressings, the roof being tiled, and the style is Domestic Gothic, with some modification in detail. The new Board-room is 30 ft. by 20 ft., and 20 ft. high.

Metropolitan Sepulture.—At the meeting of the Commissioners of Sewers, on the 11th inst., a letter was read from Mr. T. Willson, an architect, offering to submit his plans of the Pyramid Necropolis to the Court for their consideration. The idea was that of a sanitary sepulture for the metropolis, producing interment space for 625,000 dead, in vaults, upon a superficial area of five acres of land only.

St. Paul's Cathedral.—The *Graphic* of last week reproduced a clever drawing of St. Paul's and the *Times* Office, as seen from the Underground Railway, made by Mr. H. H. Statham.